

ADOLESCENT PERSPECTIVES ON FAMILY CONFLICT RESOLUTION:
EXPLORING THE RELATIONSHIPS AMONG PROCEDURAL JUSTICE,
IDENTITY ORIENTATION, AND DEVIANT BEHAVIOR

By

JENNIFER L. LUESCHER

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2004

Copyright 2004

by

Jennifer L. Luescher

ACKNOWLEDGMENTS

First I wish to thank my supervisory committee chair, Dr. Mark Fondacaro, for assisting with all stages of the present study. I also appreciate his assistance with all aspects of my graduate school career. I thank Dr. Fondacaro and the other members of my supervisory committee (Drs. Lonn Lanza-Kaduce, Scott Miller, and Greg Neimeyer) for their flexibility and assistance throughout the dissertation process. I encountered many roadblocks to my dissertation. It could not have been completed without their understanding, support, and encouragement.

Many other individuals helped with the completion of my dissertation. I would like to acknowledge Jack Smith, principal of Timberstone Junior High School, Sylvania, OH; Christine Spohn, principal of Trinity Lutheran School, Toledo, OH; the Honorable Judge James Ray and staff of the Lucas County Juvenile Court; and Betty Smith of Grace Community Center and Adrianna Rivera of Friendly Center, Toledo, OH for assistance in recruiting participants. I am also grateful to the parents and students, who agreed to participate in the present study, for sharing their time and opinions.

I also appreciate Dr. Michael Carey, Training Director, Northwest Ohio Internship Consortium, for assistance in navigating the research process at the Medical College of Ohio; and Dr. Charlene Cassel, Harbor Behavioral Healthcare, for providing encouragement and guidance throughout the project. I also would like to thank Rebecca Alperin, Ph.D., and Monica Jacobs, Psy.D., for assistance with data analysis.

I am grateful to the faculty and students who worked on the grant-funded study,

on which part of this research is based, including Drs. Scott Miller, Mark Fondacaro, Jennifer Woolard, Steve Boggs, Eve Brank, Mel Lucas, Steven Smith, Veda Brown and Ramona Greig, as well as Anca Mirsu-Paun, and Imicuk Loyuk. I also would like to acknowledge the middle school students and their parents, who agreed to participate in Study Two.

I also would like to thank the core and affiliated faculty of the Counseling Psychology program for helping me to develop my therapeutic and research skills and allowing my development as a clinician, researcher, and person.

I would not have survived my undergraduate or graduate studies without the love and encouragement of Karen Christy and Tracy Reinman, J. D. I also could not have maintained my sanity while completing internship and finishing my dissertation without the never-ending favors and support from Rebecca Alperin, Ph.D.

Finally, I owe my perseverance and strength in achieving this degree to the love and endless faith and encouragement I received from my mother, Kristine Edgar. I can never fully express how thankful I am to her for taking this roller coaster ride with me and for helping me come through stronger and as a more complete person.

TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS.....	iii
LIST OF TABLES.....	viii
LIST OF FIGURES.....	xii
ABSTRACT.....	xiii
 CHAPTER	
1 Introduction.....	1
Family Functioning in Families of Adolescents.....	1
Family Conflict.....	1
Family Cohesion.....	2
Identity Orientation.....	3
Justice.....	4
Distributive Justice.....	4
Procedural Justice.....	4
Procedural Justice in Organizational and Nonfamilial Settings.....	5
Procedural and Distributive Justice in the Family.....	6
Summary.....	7
2 LITERATURE REVIEW.....	8
Family Functioning in Families of Adolescents.....	8
Family Conflict.....	8
Family Cohesion.....	19
Identity Orientation.....	23
Justice.....	25
Distributive Justice.....	26
Procedural Justice.....	26
Procedural Justice in Organizational and Nonfamilial Settings.....	29
Procedural and Distributive Justice in the Family.....	32
Summary and Hypotheses.....	39

3	METHODS	43
	Study One.....	43
	Participants.....	43
	Instruments.....	44
	Family Decision Making Questionnaire-Youth form (FDMQ-Y)	44
	Family Relationships Index of the Family Environment Scale (FRI)	46
	Measure of psychosocial functioning	47
	Aspects of Identity Questionnaire, Version IIIx (AIQ)	48
	Self-Report Delinquency Scale (SRDS) and alcohol and drug use measure.....	49
	Analyses.....	51
	Study Two.....	51
	Participants.....	51
	Instruments.....	52
	Family Decision Making Questionnaire-Youth form (FDMQ-Y)	52
	Self-Report Delinquency Scale (SRDS).....	52
	Massachusetts Youth Screening Instrument-Second Version (MAYSI-2)	54
	Analyses.....	55
4	STUDY ONE RESULTS.....	60
	Demographics	60
	Analyses	61
	Family Cohesion and Global Procedural Fairness.....	62
	Family Conflict and Global Procedural Fairness.....	63
	Anger Arousal, Negative Emotional Response, and Global Procedural Fairness	64
	Personal Respect and Status Recognition.....	65
	Identity Orientation.....	67
5	STUDY TWO RESULTS.....	73
	Demographics	73
	Anger Arousal, Deviant Behavior, and Global Procedural Fairness	78
	Personal Respect and Status Recognition	81
	Voice, Global Procedural Fairness, and Deviant Behavior.....	100
	Differences in Procedural Justice Indices across Offense Groups.....	110
6	CONCLUSIONS.....	138
	Anger Arousal, Deviant Behavior, and Global Procedural Fairness	140
	Personal Respect and Status Recognition	143
	Identity Orientation.....	155
	Voice, Global Procedural Fairness, and Deviant Behavior.....	157
	Differences in Procedural Justice Indices across Offense Groups.....	161
	Implications.....	163
	Limitations and Future Directions	164

APPENDIX

A	PARENTAL INFORMED CONSENT AND PARTICIPANT ASSENT FORM ..	171
B	MEASURES	177
C	INSTRUCTIONS FOR RATING CONFLICT SEVERITY	196
D	PARENTAL INFORMED CONSENT FOR THE DEPARTMENT OF EDUCATION FUNDED REASERCH PROJECT	199
E	ASSENT SCRIPT FOR THE DEPARTMENT OF EDUCATION FUNDED RESEARCH PROJECT	202
F	ITEMS USED TO CREATE THE VIOLENT OFFENSE SRDS SUBSCALE.....	204
	LIST OF REFERENCES	205
	BIOGRAPHICAL SKETCH.....	215

LIST OF TABLES

<u>Table</u>	<u>page</u>
4-1 Grade Level	70
4-2 Ethnic Background	70
4-3 Individuals Living in the Household with Participants	70
4-4 Multiple Regression Predicting Family Cohesion and Family Conflict Using Global Procedural Fairness and Conflict Severity.....	70
4-5 Multiple Regression Predicting Anger Arousal and Negative Emotional Response Using Global Procedural Fairness and Conflict Severity	71
4-6 Multiple Regression Predicting Global Procedural Fairness Using Personal Respect, Status Recognition, and Conflict Severity	71
4-7 Multiple Regression Predicting Anger Arousal Using Personal Respect, Status Recognition, and Conflict Severity.....	71
4-8 ANCOVA for Moderation of Collective Identity on SRDS Delinquency and Status Recognition	72
4-9 Means for SRDS Delinquency Scores	72
4-10 ANCOVA for Moderation of Collective Identity on SRDS Drug and Status Recognition	72
4-11 Means for SRDS Drug Scores	72
5-1 Ethnic Background	113
5-2 ANOVA for State and Deviant Behavior	113
5-3 Means across States for Deviant Behavior	113
5-4 ANOVA for Grade and Deviant Behavior	113
5-5 Means across Grade for Deviant Behavior	114
5-6 ANOVA for Age and Deviant Behavior	114

5-7	Means across Age for Deviant Behavior.....	114
5-8	ANOVA for Gender and Deviant Behavior	114
5-9	Means across Gender for Deviant Behavior.....	114
5-10	ANOVA for Grades in School and Deviant Behavior	115
5-11	Means across Grades in School for Deviant Behavior.....	115
5-12	ANOVA for Ethnicity and Deviant Behavior	115
5-13	Means across Ethnicity for Deviant Behavior.....	115
5-14	ANOVA for Socioeconomic Status and Deviant Behavior	116
5-15	Means across Socioeconomic Status for Deviant Behavior.....	116
5-16	Simultaneous Entry Regressions Predicting Deviant Behavior Using Demographic Variables.....	116
5-17	Hierarchical Regression Predicting Deviant Behavior Using Demographic Variables.....	117
5-18	Multiple Regression Predicting Anger Arousal Using Global Procedural Fairness and Demographic Variables.....	118
5-19	Multiple Regression Predicting Deviant Behavior Using Global Procedural Fairness and Demographic Variables.....	119
5-20	Multiple Regression Predicting Global Procedural Fairness Using Personal Respect, Status Recognition, Demographic Variables.....	120
5-21	Multiple Regression Predicting Anger Arousal Using Personal Respect, Status Recognition, and Demographic Variables.....	121
5-22	Hierarchical Regression for Mediation of Personal Respect on Global Procedural Fairness and Anger Arousal Including Demographic Variables.....	122
5-23	Hierarchical Regression for Mediation of Status Recognition on Global Procedural Fairness and Anger Arousal Including Demographic Variables.....	123
5-24	Model Goodness of Fit Indices for the Entire Sample for the Mediation of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal.....	124
5-25	Standardized Estimates for the Entire Sample for the Partial Mediation Model with Covariance for Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal.....	124

5-26	Model Goodness of Fit Indices for All Samples for the Mediation of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal	125
5-27	Standardized Estimates for All Samples for the Partial or Full Mediation Model with Covariance for Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal	126
5-28	Model Goodness of Fit Indices for the Entire Sample for the Mediation of Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal	126
5-29	Standardized Estimates for the Entire Sample for the Partial Mediation Model with Covariance for Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal	127
5-30	Model Goodness of Fit Indices for All Samples for the Mediation of Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal	127
5-31	Standardized Estimates for All Samples for the Partial or Full Mediation Model with Covariance for Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal	128
5-32	Multiple Regression Predicting Deviant Behavior Using Voice and Demographic Variables	129
5-33	Regression Analyses for the Mediation of Voice on Global Procedural Fairness and Deviant Behavior Including Demographic Variables	130
5-34	Model Goodness of Fit Indices for the Entire Sample for the Mediation for Voice on Global Procedural Fairness and Deviant Behavior	131
5-35	Standardized Estimates for the Entire Sample for the Partial Mediation Model for Voice on Global Procedural Fairness and Deviant Behavior	131
5-36	Model Goodness of Fit Indices for All Samples for the Partial and Full Mediation Models for Voice on Global Procedural Fairness and Deviant Behavior	131
5-37	Standardized Estimates for All Samples for the Partial or Full Mediation Model for Voice on Global Procedural Fairness and Deviant Behavior	132
5-38	Model Goodness of Fit Indices for the Entire Sample for the Mediation of Global Procedural Fairness on Voice and Deviant Behavior	132
5-39	Standardized Estimates for the Entire Sample for the Partial Mediation Model for Global Procedural Fairness on Voice and Deviant Behavior	133

5-40	Model Goodness of Fit Indices for All Samples for the Mediation of Global Procedural Fairness on Voice and Deviant Behavior	133
5-41	Standardized Estimates for All Samples for the Partial or Full Mediation Model for Global Procedural Fairness on Voice and Deviant Behavior	134
5-42	Multivariate Analyses for Procedural Justice Indices, Group Status, and Select Demographic Variables	135
5-43	Univariate Analyses for Procedural Justice Indices, Group Status, and Select Demographic Variables	136
5-44	Means for Group Status on Personal Respect, Voice, and Status Recognition.....	137

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
3-1 Initial Path Model: Partial Mediation of Personal Respect and Status Recognition on the Relationship between Global Procedural Fairness and Anger Arousal.....	57
3-2 Initial Path Model: Partial Mediation of Voice on the Relationship between Global Procedural Fairness and Deviant Behavior.....	59
5-1 Revised Model 3, Partial Mediation Model with Covariance of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal for the Entire Sample.	95
5-2 Model 7, Partial Mediation Model with Covariance of Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal for the Entire Sample.	98
5-3 Revised Model 1, Partial Mediation Model of Voice on Global Procedural Fairness and Deviant Behavior for the Entire Sample.	106
5-4 Model 3, Partial Mediation Model of Global Procedural Fairness on Voice and Deviant Behavior for the Entire Sample.....	109

Abstract of Dissertation Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Doctor of Philosophy

ADOLESCENT PERSPECTIVES ON FAMILY CONFLICT RESOLUTION:
EXPLORING THE RELATIONSHIPS AMONG PROCEDURAL JUSTICE,
IDENTITY ORIENTATION, AND DEVIANT BEHAVIOR

By

Jennifer L. Luescher

December 2004

Chair: Mark Fondacaro

Major Department: Psychology

Families experience heightened conflict as children move through adolescence. Research suggests that ongoing, high levels of family conflict can have negative effects on adolescents, including decreased psychological well-being and increased deviant behavior. Justice considerations may assist in understanding the relationships between high levels of family conflict and both psychological distress and deviant behavior in adolescents. The present study examined procedural justice, focusing on the fairness of the process of dispute resolution in families of adolescents. Adolescents in two samples responded to surveys including the Family Decision Making Questionnaire-Youth Form (FDMQ-Y) and the Self-Report Delinquency Scale. The FDMQ-Y asks adolescents to describe a recent family conflict and to answer questions regarding aspects of the procedural justice construct, which measure the adolescents' perceptions of the fairness of family conflict resolution procedures. One of the samples included over 2,000 adolescents from five US states. Results showed that adolescent perceptions of overall

procedural justice were related to anger arousal and deviant behavior. Specific facets of the procedural justice construct including personal respect, status recognition, and voice were also explored in relation to general procedural justice judgments, anger, and deviant behavior. Perceptions of personal respect (feeling respected as an important individual) and status recognition (feeling respected as an important family member) were found to mediate the relationship between global procedural fairness and general feelings of anger. Voice (having the opportunity to provide input in the conflict-resolution process) was related to levels of deviant behavior. Participants in one of the samples were divided into three groups based on the type of deviant behavior they reported engaging in within the last year. The three groups included adolescents who reported never engaging in deviant behavior, those who reported only engaging in nonviolent and/or status offenses, and those who reported engaging in violent offenses. Comparisons were made across groups on adolescents' perceptions regarding these specific facets of procedural justice. Recommendations were made for future research and applications of these findings to parenting-skills training, family therapy, and family conflict resolution.

CHAPTER 1 INTRODUCTION

The purpose of the present study was to determine the influences of adolescent identity orientation and perceptions of procedural fairness within families on the relationship between overall family functioning and adolescent deviant behavior. The family environment provides an important context for understanding adolescent deviant and aggressive behavior. Parent-adolescent conflict has received a great deal of attention as researchers have moved away from the storm and stress model to recognizing that parent-adolescent conflict is common and an important part of the child's efforts to attain increased autonomy. Research has shown, however, that continued unresolved conflict within the family does lead to psychosocial difficulties for adolescents, including juvenile delinquency (Montemayor, 1986).

Family Functioning in Families of Adolescents

During adolescence, children experience an increased desire for greater autonomy from parents. Consequently, conflict increases between parents and children because of parents' difficulty in allowing for increased autonomy (Comstock, 1994). However, most adolescents still describe their families as being close, positive, and flexible despite increased conflict during this period (Montemayor, 1986).

Family Conflict

Many conflicts that arise during adolescence in American families are caused by adolescents progressively perceiving more aspects of their lives as being within their own personal jurisdiction (i.e., as private matters) in an attempt to create an autonomous self

(Fulgini, 1998; Nucci & Lee, 1993; Smetana, 1988). These results have been found across ethnic groups within the United States. These children are attempting to test their autonomy, and cause tension with parents who struggle with relinquishing their authority. Adolescence is therefore a period of increased conflict within the family.

High levels of family conflict have been shown to negatively affect adolescent functioning, and to increase antisocial behavior and other externalizing behaviors (including association with deviant peers, conduct problems, high-risk sexual behavior, and substance use) (Ary, Duncan, Duncan, & Hops, 1999; Daniels & Moos, 1990; Formoso, Gonzales, & Aiken, 2000; Fraser, 1996; Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Holmbeck & O'Donnell, 1991; McCord, 1991; Moffitt, 1993; Montemayor, 1986). High levels of family conflict also have been associated with increased internalizing behaviors in adolescence, including greater emotional detachment from others, decreases in self-concept, and higher levels of depression (Daniels & Moos; Formoso et al.; Fraser; Gorman-Smith et al.; Holmbeck & O'Donnell; McCord; Moffitt; Montemayor; Shek, 1998).

Family Cohesion

High levels of family conflict have been associated with decreases in psychological well-being in adolescents. However, high levels of family cohesion have been found to be related to greater self-confidence and low levels of psychological distress and problem behaviors in adolescents (Daniels & Moos, 1990). Low levels of family cohesion, on the other hand, have been shown to contribute to both higher levels of internalizing behaviors (i.e., higher levels of depression and lower self-concept scores) and externalizing behaviors in adolescents (i.e., higher levels of Conduct Disorder) (Gehring, Wentzel, Feldman, & Munson, 1990; Wentzel & Feldman, 1996).

Research on family functioning in families of adolescents has shown that parent-adolescent conflict does increase during adolescence. Ongoing intense conflict in the family negatively affects family cohesion and the adolescent's psychological well-being. Low levels of cohesion in the family also have been associated with lower levels of psychological well-being and higher levels of deviant behavior. The family-level variables of conflict and cohesion also may be tied to individual-level variables, especially identity orientation.

Identity Orientation

Identity orientation refers to the importance placed on identity attributes when creating notions of self. Cheek and colleagues (Cheek, 1982/83; Cheek & Tropp, 1994; Cheek, Tropp, Chen, & Underwood, 1994) described three identity orientations: personal identity orientation, social identity orientation, and collective identity orientation. Personal identity orientation is defined as an individual's private ideas about his or her selfhood and subjective feelings of uniqueness and continuity (Berzonsky, 1994; Cheek et al.). Social identity orientation is characterized as aspects of the self defined by social roles and interpersonal relationships. Collective identity orientation focuses on sociological variables and feelings of commitment to one's community (Berzonsky; Cheek et al.). Cheek and colleagues suggest that most individuals likely experience one of these identities as more important than the other two to their conception of themselves.

Studies have considered the relationships among these identity orientations and other personality attributes and behavior, but none have focused specifically on the family context. Based on procedural justice research and findings related to the importance of feeling personally respected and recognized as an important member of a

group, it is believed that an individual's primary identity orientation may affect his or her appraisals of fairness and justice in the context of resolving parent-child conflict.

Justice

Justice considerations within the family context also may affect psychological well-being and deviant behavior in adolescents (Fondacaro, Dunkle, & Pathak, 1998).

Distributive Justice

Distributive justice focuses on the perceived fairness of the outcome achieved during the process of conflict resolution. Three principles of distributive justice are equity, equality, and need. Equity focuses on distributions where the outputs are equal to the inputs (Deutsch, 1975), and is often preferred in disputes involving economic issues (Steil, 1994). The principle of equality is often used in interpersonal relationships and is based on dividing outputs equally (Deutsch; Steil). Need involves allocating outputs based on the needs of group members, and is used most often by people who are members of intimate groups, like families (Deutsch).

Procedural Justice

Procedural justice focuses on the fairness of procedures used during conflict resolution. Thibaut and Walker (1975) developed and described one of the first theories of procedural justice focusing on legal decision-making. Their theory emphasizes process control (that is, control over the presentation of information or evidence) and decision control (which involves control over the outcome or decision). Leventhal (1980) also developed a theory of procedural justice encompassing the following constructs: representation, consistency, impartiality, accuracy, correctibility, and ethicality. A third procedural justice theory is Tyler's identity-based relational model (Tyler, 1994; Tyler & Lind, 1992; Tyler, Boekmann, Smith, & Huo, 1997). This model includes three

constructs (neutrality, trust, and standing/status recognition) and is based on social identity theory. Tyler's premise is that considerations of procedural justice are important because they give people information about their status in groups and their relationship with group authorities. Fair treatment is considered to be a sign that the person is a respected member of the group, while unfair treatment suggests that the individual is not an important member of the group or that the group is not concerned about the welfare of the individual. These models of procedural justice have been explored in work and organizational settings, as well as in the family context (Diamond, 2001; Diamond, Luescher, & Fondacaro, 2000; Fondacaro et al., 1998; Fondacaro & Heller, 1990; Jackson & Fondacaro, 1999; Luescher, Fondacaro, & McNatt, 2001; Tyler, 1994; Tyler & Blader, 2000; Tyler & Smith, 1999).

Procedural Justice in Organizational and Nonfamilial Settings

Several research studies have been conducted on Tyler's models in workplace and legal contexts. These studies concluded that a relation-dominated model (focusing on social bonds between people and groups, institutions, and group authorities) appeared to best explain procedural justice judgments (Tyler, 1994). Results also suggested that authorities who were in-group members had the greatest impacts on individuals' self-esteem and degree of group conforming behavior (Tyler & Smith, 1999). Tyler and Blader (2000) described a group engagement model that focuses on having voice in decision-making, and suggests that individuals participate in groups to find evidence of their own positive attributes.

Research on procedural justice in workplace and nonfamilial organizational settings has shown that perceptions of procedural justice affect perceptions of outcome fairness and satisfaction. Results also have shown that having voice in the decision-making

process increases perceptions of fairness (Tyler & Blader, 2000). Finally, it appears that individuals develop ideas about themselves based on the treatment they receive from others, especially other members of their in-groups (Tyler, 1994; Tyler & Lind, 1992; Tyler & Smith, 1999; Tyler et al., 1997).

Procedural and Distributive Justice in the Family

Procedural justice theories can help understand family conflict by providing an explanation for why high levels of conflict may cause adolescents to experience decreased psychological well-being and to engage in increased deviant and antisocial behavior. Different parenting styles have been found to affect overall family functioning, as well as individual functioning, among adolescents (Smetana, 1995). An authoritative parenting style is consistent with procedures that have been found, in the procedural justice literature (e.g., voice, status recognition, and personal respect), to improve perceptions of fairness in the resolution of conflict (Leventhal, 1980; Thibaut & Walker, 1975; Tyler, 1989). Authoritative parenting has been related to low levels of deviant behavior (Baumrind, 1971).

Research focusing on procedural justice within the family has shown that when an adolescent perceives procedural injustice during the course of family conflict resolution, the adolescent feels disrespected and devalued as a member of the family, and experiences increased anger arousal (Fondacaro et al., 1998; Fondacaro & Heller, 1990; Jackson & Fondacaro, 1999; Luescher et al., 2001). These families were also characterized by lower levels of overall family cohesion and higher levels of family conflict, while the child experienced lower levels of psychological well-being and higher levels of psychological distress (Diamond, 2001; Diamond et al., 2000; Fondacaro et al.).

Summary

Levels of family conflict increase, and levels of family cohesion decrease as children move through adolescence in many families. These changes in family functioning are associated with decreases in psychological well-being, including increases in internalizing behaviors and externalizing, deviant, and aggressive behavior in adolescents. The present study examines procedural justice and family conflict in families of adolescents. Two different studies are reported as part of the present study. In Study One, a sample of adolescents completed a survey focusing on multiple constructs, including (1) family conflict and cohesion; (2) perceptions of procedural justice regarding the overall family conflict resolution process, as well as perceptions of specific facets of procedural justice as applied to that process; (3) affective responses to the conflict-resolution process; (4) identity orientation; and (5) delinquent behavior and drug use.

In Study Two, a larger sample of younger adolescents also completed a survey focusing on procedural justice and delinquent behavior. In Study Two, adolescents were divided into groups based on the type of deviant behavior they had reported engaging in. Data analysis explored any group differences in perceptions of overall procedural justice and specific facets of the procedural justice construct. Combined, the results from Studies One and Two assess the relationships among identity orientation, justice appraisals, family conflict, and deviant behavior.

CHAPTER 2 LITERATURE REVIEW

This literature review is organized in the same order as Chapter 1. It covers the following literature: family functioning in families of adolescents, identity orientation, and justice.

Family Functioning in Families of Adolescents

The phases of adolescence reflect progressive physical and cognitive development and increases in the adolescent's need for autonomy (Comstock, 1994). In early adolescence, children begin to challenge or reject parental authority and vacillate between a desire to be obedient and a desire to be autonomous. In middle adolescence, families experience increased conflict because parents are not accustomed to listening to the adolescents' attempts at reasoning with them (Comstock). Adolescence is a period that involves a great deal of transition and conflict within the family unit. However, most adolescents report that even though they argue with their parents, they consider their families to be close, positive, and flexible. Smetana (1995) argues that both autonomy and constraint characterize parent-adolescent relationships and that the amount of each varies according to the context of the conflict. Adolescents are more likely to challenge parental authority regarding issues that they perceive to be within their personal jurisdiction.

Family Conflict

Nucci and Lee (1993) defined personal domains as those that comprise the private aspects of one's life and those that entail issues of preference or choice. They found that

adolescents shift from defining personal issues in terms of behaviors, to defining personal issues in terms of establishing and maintaining a distinct set of opinions, preferences, and values that define the individual's uniqueness. Increased use of personal justifications (justifications based on individual preferences and choices) is tied to younger adolescents' attempts to define themselves as unique from others with an autonomous self. Often parents do not feel that a particular issue is within the child's personal jurisdiction, and as a result, conflict occurs. Smetana (1995) argues that culture plays a role in perceptions of conflict; and that within the culture of the United States, which is more individualistic than many others, there are more areas adolescents' perceive to be within their own personal jurisdiction. These areas include issues of social and nonsocial activities, actions that focus on the state of their bodies, and behavioral style (Arnett, 1999). Arnett agrees that many of the conflicts in adolescence are due to adolescents becoming more individualistic, as is expected in this culture, and their parents' attempts to deal with their increasing push toward independence. Often parents and adolescents disagree as to the rate at which adolescents should become independent.

Smetana (1988) focused on the conflicts that arise as adolescents begin to view more aspects of their lives within their own personal jurisdiction, and desire greater autonomy in their relationships with their parents. In Smetana's study, 102 fifth through twelfth grade middle and upper class European American adolescents and their parents participated. Adolescents and parents sorted cards describing conflicts as within the realm of different domains: moral (issues pertaining to rights and welfare of others); social-conventional (agreed upon behavioral rules for social interactions); personal (issues that pertain only to the individual that are seen as beyond society's control); and

multifaceted (issues that fall into more than one of these domains). They also reported who they felt had authority within these different domains.

Results showed that mothers and fathers were more likely than adolescents to see the personal and multifaceted issues as within parental authority than were adolescents. This was most apparent with the youngest participants. Adolescents also used more personal reasoning (i.e., believed the decision was theirs to make) about the conflicts as they increased in age, while parents' reasoning did not change. Smetana and colleagues suggested that conflict increases because as adolescents begin to see more decisions as personal in nature, parents feel this change is in direct conflict with family rules and norms.

Fuligini (1998) suggested that if striving for autonomy is the reason for increased conflict in adolescence, then the importance of autonomy across different cultures and within different ethnic groups within the United States should be examined. In families from different ethnic backgrounds within the United States, the degree of acculturation may affect the level of importance placed on autonomy by adolescents. Fuligini studied sixth, eighth, and tenth grade students (in the United States) of Mexican, Chinese, Filipino, and European ancestry. Mean ages for the three grades were 12.1 years, 14.2 years, and 16.2 years, respectively. Adolescents were classified as first generation, second generation, or third generation or greater. They were assessed as to how appropriate they felt it was to disagree with their parents, how legitimate they felt their parents' authority was, and what their expectations were of the ages at which they would be allowed to engage in various autonomous behaviors.

The Issues Checklist (Prinz, Foster, Kent, & O'Leary, 1979; Robin & Foster, 1984) was used to measure adolescents' perceptions of the frequency and intensity of conflict with their parents. Family cohesion was measured with the cohesion subscale of the Family Adaptation and Cohesion Evaluation Scales II (Olson, Sprenkle, & Russell, 1979). Results showed that adolescents from Mexican, Chinese, and Filipino backgrounds held beliefs and expectations consistent with a greater respect for parental authority and lower emphasis on autonomy than European American students did. All adolescents, however, were more willing to engage in conflict with their mothers than with their fathers. Across ethnic groups, older adolescents were more willing to disagree with either parent, and less willing to accept parental authority over their lives than were younger adolescents.

Students who were second or third generation tended to be more willing to openly disagree with their parents, and had earlier expectations for autonomy than did those who were first generation. Although the different ethnic groups and generations differed in their beliefs about conflict, actual occurrences of conflict were similar across all groups. Conflict levels were relatively low among all adolescents, and were greater with mothers than with fathers. Older students experienced less cohesion with both parents than did younger children. Results of Fuligini's study suggested that while views about autonomy differ among ethnic groups within the United States, the behavior of the adolescents in all four ethnic groups was consistent and showed an increased desire for autonomy as the child progressed through adolescence.

Research suggests American adolescents increasingly view issues as within their personal jurisdiction and therefore feel that they should be able to make decisions on their

own. The adolescents thus asserts and tests this autonomy, often causing conflict in the family because parents are not ready to relinquish authority. The studies also suggest that while adolescents' levels of autonomy and assertion of personal jurisdiction may vary somewhat across ethnic groups within the United States, adolescents from diverse ethnic backgrounds are similar in that they all attempt to achieve some degree of increased autonomy from parents during this period.

The studies focusing on personal jurisdiction suggest that conflict increases in families as children move through adolescence. Higher levels of family conflict have been related to antisocial behavior, immaturity, and low self-esteem. Smetana, Braeges, and Yau (1991) suggest family members' perceptions and attitudes toward dealing with conflict affect the level of conflict within the family. Noller (1994) reported similar findings: adolescents whose parents expressed democratic rather than coercive communication and conflict-resolution styles made better personal decisions. Authoritarian parenting techniques, in contrast, increased family conflict and led to more acting-out behavior on the part of the adolescents.

Research has shown that rates of conflict in families with adolescents vary a great deal. Persistent conflict and stress have multiple adverse effects on adolescents: (1) they spend less time with parents and more time with peers; (2) they experience increased risk for deviant behaviors, externalizing behaviors (such as delinquency, marijuana and alcohol use), running away from home, premarital sexual relations; and (3) they experience increased risk for internalizing problems (like low self-esteem, depression, and suicide attempts) (Montemayor, 1986). Parent-adolescent conflict appears to be affected by three separate processes within the family: communication/problem solving

style, child/adolescent management techniques, and exchange of positive and negative behaviors (Montemayor). Poor communication and problem solving leads to unresolved conflict, because these deficits in parenting result in increased coercive interactions between parents and children. These coercive interactions may lead to child abuse by parents, and to aggressive and out-of-control behaviors by children. The parental management skills that most affect levels of parent-adolescent conflict seem to be parental monitoring of children, discipline, and reinforcement of positive behavior (Dishion, French & Patterson, 1995; Montemayor). Adolescent deviance and family dysfunction are most often seen in families with parents who are either too authoritarian or too lenient. Also, in families with high levels of conflict, members reciprocate each other's aversive behaviors more frequently than in families with lower levels of conflict (Montemayor; Patterson, 1982).

Family conflict and harsh punishment may lead to aggressive behavior with onset in childhood (Daniels & Moos, 1990; Deater-Deckard & Dodge, 1997; Fraser, 1996; Gorman-Smith, Tolan, Zelli, and Huesmann, 1996; McCord, 1991; Moffitt, 1993). Ongoing family conflict has been associated with low self-confidence, psychosocial distress, and behavior problems. In contrast, family resources and cohesion were associated with greater self-confidence, less psychological distress, and fewer problem behaviors in adolescents (Daniels & Moos). The following studies consider the relationships among family conflict, increased problem behavior, and decreased psychological functioning.

Holmbeck and O'Donnell (1991) studied adolescents and their mothers who answered questionnaires concerning family functioning and adolescent adjustment at

both Time One and Time Two (6 months later). The adolescents and mothers completed the Decision-Making Questionnaire, the Desire for Autonomy Scale, the Issues Checklist, and Harter's Revised Self-Perception Profile for Children. The Decision-Making Questionnaire (Dornbusch et al., 1985; Steinberg, 1987) assesses perceptions of who makes decisions within the family, with regard to a specific list of issues. The Desire for Autonomy Scale (O'Donnell & Holmbeck, 1989) focuses on parent and adolescent desire for more or less control over the same issues covered in the Decision-Making Questionnaire. The Issues Checklist (Robin & Foster, 1989) is a measure of parent-adolescent conflict and covers the same issues focused on in the other measures. The Harter Revised Self-Perception Profile for Children (Harter, 1985) is a multidimensional measure of the child's self-concept.

Adolescents also completed the Emotional Autonomy Scale (Steinberg & Silverberg, 1986) and a measure of detachment (Ryan & Lynch, 1989). Mothers also completed the Family Adaptability and Cohesion Evaluation Scales (Olson, 1986; focusing on the cohesiveness subscale) and the Inventory of Parent Attachment (Armsden & Greenberg, 1987; measuring maternal attachment to the adolescent). Mothers and teachers completed the Achenbach Child Behavior Checklist (Achenbach & Edelbrock, 1983; measuring adolescent internalizing and externalizing behaviors).

Results showed greater levels of conflict for mother-child pairs in which the mother and adolescent disagreed over who should be the decision-maker within the family. Adolescents also reported less conflict and greater detachment from mothers in families where the adolescent felt in charge of decision-making. In families with mothers who were less likely to grant autonomy, adolescents reported more emotional detachment

from mothers, and their teachers reported greater internalizing symptoms. Mothers reported more conflict and externalizing symptoms, among adolescents who attempted to gain more autonomy than the mothers were willing to grant. Adolescents in families in which mothers were not willing to grant autonomy had decreased self-concept scores over the 6-month period.

Shek (1998) also looked at the effect of family conflict on adolescent behavior and psychological well-being in a longitudinal study of families from Hong Kong. Psychological well-being was conceptualized as both lack of psychiatric morbidity and the existence of positive mental health. Positive mental health was measured as low scores on the Chinese Hopelessness Scale (Shek, 1993) and the Chinese version of the General Health Questionnaire (Chan, 1985) and high scores on the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffen, 1985; Shek, 1992), Chinese Rosenberg Self-Esteem Scale (Shek, 1992), and Chinese Purpose in Life Questionnaire (Crumbaugh, 1968; Shek, 1988). The adolescents were 12 to 16 years old, and the second wave of data was collected 1 year after the first wave.

Results showed that conflict was related both to positive mental health and to negative mental health. At Time One and at Time Two, adolescents who experienced greater parent-adolescent conflict had lower levels of positive mental health and higher levels of psychiatric morbidity. Results also showed that higher conflict at Time One was related to lower levels of positive mental health and higher levels of psychiatric morbidity at Time Two. The reverse was also shown: higher levels of psychological well-being at Time One predicted lower levels of conflict at Time Two. Shek (1998) found that father-adolescent conflict affected well-being more than mother-adolescent conflict did. The

results also showed that conflict affected well-being equally for males and females. Shek asserted that this finding was not surprising, because conflict in Chinese culture is frowned on for both the sexes.

Ary, Duncan, Duncan, and Hops (1999) also focused on the relationship between behavior problems and family conflict. They based their work on Patterson, Reid, and Dishion's (1992) developmental model of antisocial behavior, which asserts that delinquency is due proximally to peer influences, but that associations with particular peers are affected by parental behavior (including coercive interactions and poor parental monitoring). In their study, they interviewed families annually for 3 years. Half of the families were single-parent families, and the mean age of the adolescents was 16 years at the first assessment. Family conflict was measured using the Conflict Behavior Questionnaire (Prinz et al., 1979) and positive family relations were measured using the cohesion subscale of the Family Environment Scale (Moos, 1975).

Ary and colleagues found that families with high levels of conflict and poor family relations were more likely to develop a social context characterized by inadequate parental modeling and associations with deviant peers. Poor parental modeling and associations with deviant peers were then associated with problem behavior, including antisocial behavior and high-risk sexual behavior, academic failure, and substance use in individuals in mid to late adolescence.

Many studies focusing on the relationships among internalizing and externalizing behaviors and family conflict have found that most children experiencing family conflict do not experience adjustment problems. Formoso, Gonzales, and Aiken (2002) attempted to assess whether specific protective factors affect the relationship between family

conflict and behavior problems. Protective factors are those that buffer children against the negative effects of family stress and often include temperament, familial factors, and extrafamilial support. Formoso and colleagues sought to determine specifically whether the source of protective factors (whether from parents, a particular parent, or from peers) matters; and whether the influence of protective factors varies by gender or ethnicity. The sample for Formoso and colleagues' study included junior high school students who were living with at least one parent. The mean age of the students was 13 years and students were of various ethnicities including Anglo American, African American, Mexican American, Native American, and other.

Formoso and colleagues found that high levels of family conflict were related to higher levels of adolescent depression and conduct problems, while protective factors were related to lower levels of adolescent depression and fewer conduct problems. Specific protective factors found to be effective were parental attachment and parental monitoring. Parental attachment was measured by the revised Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) which assesses positive and negative aspects of the adolescents' attachment to parents and peers. Parental monitoring was measured by the Assessment of Child Monitoring (Hetherington et al., 1992), which focuses on how much parents monitor their children.

Results revealed that maternal attachment, maternal monitoring, and paternal monitoring were associated with decreased levels of conduct problems in females. These protective factors moderated the relationship between family conflict and conduct problems for females. Paternal attachment, however, was not associated with levels of family conflict or conduct problems in females. For males, maternal attachment, maternal

monitoring, and paternal monitoring were correlated with increased level of conduct problems. However, lower paternal attachment was related to lower levels of family conflict and conduct problems. Results suggested that risk and protective factors worked similarly across the different ethnic groups.

It appears that closer relationships with and greater monitoring by parents were associated with decreases in the level of girls' conduct problems; however increased attachment and supervision of boys were associated with increases in level of conduct problems. Formoso and colleagues suggested the first possible explanation for the gender difference might be that boys are more likely to imitate aggressive and conflicted behavior, and that this is more likely to occur when parents are in greater contact with their children by attempting to monitor them.

A second possibility they suggested was that gender differences in the relationship between family conflict and conduct problems may be due to gender differences in emotional arousal and regulation during times of stress. Research (Zaslow & Hayes, 1986) shows that it is more difficult for males to return themselves to equilibrium in times of stress, and they may be even less able to return to equilibrium during conflict with family members. A final explanation given was that, in comparison to girls, the socialization of boys might put greater emphasis on the rejection of parental support and supervision.

The research on family conflict in families of adolescents suggests that parent-adolescent conflict increases during adolescence, and that continuous or repeated intense conflict often has negative effects on family cohesion and adolescent

psychological well-being (including psychosocial adjustment, substance use, depression, and conduct problems and antisocial behavior).

Family Cohesion

Cohesion is also often measured to assess family functioning. Gehring and colleagues (Gehring, Wentzel, Feldman, & Munson, 1990) focused on both conflict and cohesion from a structural/systemic perspective. The structural approach to families allows one to describe families in terms of cohesiveness and power. Gehring and colleagues believe that in well-adjusted families, the parental dyad has the most power and is the most cohesive. They studied changes in cohesion and power in conflict situations, to provide a better understanding of how adolescent well-being is affected by family conflict. They studied intact families with adolescents ranging in age from 11 to 19 years. Participants completed the Family Systems Test (Gehring & Feldman, 1988), which characterizes levels of cohesion and power within the family.

The Family Systems Test was completed to represent present family relationships and family relationships as they exist during a conflict situation. Four dyad scores were represented: father-mother, father-adolescent, mother-adolescent, and adolescent-sibling. Conflicts were described along the dimensions of locus (i.e., which family members were centrally involved in the conflict); content (coded into categories: discipline, use of time, chores, money, autonomy, deviance, marital problems, and sibling fighting); and frequency (infrequent conflicts occurred 6 times or less per year, occasional conflicts occurred 1 or 2 times per month, and frequent conflicts occurred once or more per week).

Conflict was found across all four dyads, with the mother-adolescent and father-adolescent dyads experiencing the greatest amount of conflict. Early adolescents had fewer conflicts with their parents than did older adolescents. Conflict increased

during middle adolescence. Early adolescents reported conflicts about discipline and use of time most often, and mid-adolescents reported use of time and autonomy issues most often. Reports of autonomy-related issues increased with age. Older adolescents described more idiosyncratic and multidimensional conflicts than did the younger adolescents. Results showed that conflict decreased cohesion in the family as a whole, but did not increase or decrease power in the dyads.

Another study based on family systems theory (Wentzel and Feldman, 1996) suggested that cohesion and power affected adolescent adjustment, including their affect, social self-concept, and self-restraint. Wentzel and Feldman also used the Family Systems Test to represent cohesion and power in the family. Students in the sixth grade who were primarily middle class were asked about their family structure as a whole. Family cohesion was related to positive adjustment in girls, but not in boys. For the girls, low cohesion was related to higher levels of depressive affect and lower self-concept; while higher cohesion was related to more self-restraint. For boys, differences in power (i.e., non-egalitarian relationships) between the boys and each of their parents were related to depressive affect and low social self-concept.

Gorman-Smith et al. (1996) reported that parenting variables and family-relationship variables (including low levels of parental warmth, acceptance and affection, low family cohesion, and high levels of conflict and hostility) have been found to be strong predictors of antisocial behavior. Participants in Gorman-Smith and colleagues' study were from a larger longitudinal study, The Chicago Youth Development Study, which looked at the development of serious delinquent behaviors in inner-city male adolescents. Boys were African American and Latino and in the fifth or

seventh grade. Scores from the boys' self-reports and parents' reports were combined to provide overall scores for the various constructs measured in Gorman-Smith and colleagues' study. Half of the boys in the sample had high scores on the Achenbach Teacher Report Form Aggression Scale (Achenbach, 1991), and the other half of the boys had low to medium scores on this measure. Based on the child's self-report of delinquent behavior, they were divided into three groups: boys reporting no delinquent or violent offenses, boys reporting nonviolent offenses, and boys reporting violent offenses. Boys and their caregivers separately participated in a structured interview in their own home, and together engaged in a structured problem-solving task that was videotaped.

Child reports of delinquent and violent behavior were obtained using the Self-Report Delinquency Scale (Elliott, Dunford, & Huizinga, 1987), a list of 38 criminal acts (which served as the basis for dividing the boys into the three groups). To measure rates of nonviolent offending, reports of nonviolent felony offenses were weighted according to seriousness, and each score was calculated by summing the frequency of each act multiplied by its weight. Gorman-Smith and colleagues also looked at age of onset of offending (comparing boys who began offending prior to age 12 with those who began offending after age 12). Family variables were measured with a 92 item measure that was created by combining questions from the following family scales: Family Assessment Measure-III (Skinner, Steinhauer, & Santa-Barbara, 1983), Family Adaptability and Cohesiveness Evaluation Scales (Olson, Portner, & Lavee, 1985), Family Environment Scale (Moos & Moos, 1981), Family Beliefs Inventory (Roehling & Robin, 1986), and six items assessing deviant beliefs and four items assessing somatization. A factor analysis produced six factors: (a) Beliefs About the Family (with

two subfactors, Importance of Family Relationships and Beliefs About Development), (b) Emotional Cohesion, (c) Support, (d) Communication, (e) Shared Deviant Beliefs, and (f) Organization.

Results revealed parenting practices and family relations were two distinct processes. There were differences in these constructs across families whose boys were/were not engaging in different types of delinquent and violent behavior. There were no differences between the two groups of delinquents (nonviolent offenders and violent offenders) on age of onset and rate of seriousness of offending. There were differences across the three groups on levels of cohesion in the family, with families of boys who engaged in violent offenses reporting less cohesiveness than the other two groups. Gorman-Smith and colleagues concluded that lack of cohesion, as well as poor parental monitoring and poor discipline, are risk factors for the development of serious delinquency.

Studies of cohesiveness in families of adolescents suggest that conflict decreases cohesion and that lower levels of cohesion are associated with depressed affect and lower self-concept in adolescents. More generally, the literature on family functioning suggests that levels of conflict within the family increase as children move into and through adolescence and the child begins asserting more personal autonomy. Ongoing high levels of conflict and low levels of cohesiveness in the family during this time period have been found to have negative effects on adolescents (including increases in internalizing and externalizing behaviors and lower levels of self-concept). Levels of family functioning may affect and be affected by other variables at the family and individual levels of analysis. One of these individual-level variables may be identity orientation.

Identity Orientation

Identity orientation is described as the importance people place on identity attributes or characteristics when creating their notions of self. Three identity orientations have been described by Cheek and colleagues (Cheek & Briggs, 1982; Cheek & Tropp, 1994; Cheek, Tropp, Chen, & Underwood, 1994; Hogan & Cheek, 1983): personal identity orientation, social identity orientation, and collective identity orientation. Cheek and colleagues originally conceptualized two identity orientations, personal and social. Personal identity orientation is characterized as an individual's private ideas about his or her selfhood and subjective feelings of uniqueness and continuity, including personal values and goals (Berzonsky, 1994; Cheek et al.). Social identity orientation focuses on the self an individual presents publicly in social roles and interpersonal relationships and deals with one's reputation and popularity. Hogan and Cheek created these two identity orientations as separate constructs rather than two ends of a continuum, and argued that individuals differ as to how much they identify with each of these forms of identity. The individual's level of identification with both personal identity and social identity affects his or her social behavior.

After the constructs of personal and social identity were investigated in research studies, Cheek and colleagues realized that a third aspect of identity existed that was not entirely subsumed under the social identity construct (Cheek et al., 1994). They explored and developed a measure for this third identity, collective identity. Collective identity orientation is described as focusing on sociological variables (for example, ethnicity, gender, religion), feelings of commitment to one's community, and expectations and normative standards of significant others and reference groups (Berzonsky, 1994; Cheek et al.). Cheek and colleagues argue that each individual views his or her self through all

three lenses (personal, social, and collective identity orientation) but that most individuals likely experience one of these identities as more important to their conception of themselves.

Many studies have looked at the relationships among these three forms of identity orientation (personal, social, and collective) and various other personality attributes and behavior. However, none of these studies have focused on the relationship between identity orientation and family conflict in an adolescent sample. It is likely that aspects of personal identity orientation and collective identity orientation will be more important in the family context than will aspects of social identity orientation. In the present study, the collective identity orientation is stressed over the social identity orientation, because it is believed that conflicts in the family context will be more likely to affect and be affected by more systemic and relational aspects of identity orientation (which are incorporated into the collective identity orientation). Social identity orientation appears to focus more on the social reputation that emerges from interaction in interpersonal relationships. This source of identity is more focused on impression management, and the individual putting forth aspects of the self they believe others wish to see. The collective identity orientation appears more rooted in the value individuals derive from the ties they have to important groups in their lives. The family is one of these groups.

The personal and collective identity orientations appear to be related to the concepts of personal respect and status recognition that have been focused on in procedural justice research. In the process of resolving family conflict, some adolescents report that their parents do not treat them as unique individuals and report feeling low levels of personal respect. These adolescents also report lower levels of perceived overall

fairness and engage in higher levels of deviant behavior (Jackson & Fondacaro, 1999). Other adolescents report feeling that their parents do not treat them as valued members of the family in the process of resolving disputes within the family. This is referred to as low status recognition, and these adolescents have similar perceptions of fairness and rates of deviant behavior as those adolescents who report low levels of personal respect (Jackson & Fondacaro).

Results from procedural justice studies have found that individuals differ on how important personal respect or status recognition is to perceptions of procedural justice and engagement in deviant behavior. The differences in the relative importance of personal respect or status recognition to these individuals may be affected by the importance of the different identity orientations to these individuals. It is believed that individuals whose personal identity is more important to them will focus more on aspects of personal respect in determining fairness, and that personal respect will be more closely related to levels of anger arousal and deviant behavior. It is also expected that individuals who value their collective identity most will focus on aspects of status recognition in determining fairness. For these individuals levels of anger arousal and deviant behavior will be more closely related to status recognition.

Justice

Justice considerations include an emphasis on both procedural justice and distributive justice. Distributive justice focuses on whether the outcome of a conflict-resolution procedure is perceived to be fair, while procedural justice focuses on how fairly an individual feels he or she is treated in the process of resolving a conflict. The importance of considerations of procedural and distributive justice processes within the legal system in this country likely encourages use of these principles to evaluate

fairness across multiple domains, including the family context (Bronfenbrenner, 1979). In the family decision-making context, repeated unfair outcomes or unfair treatment may lead to a strong sense of injustice and resentment, which in turn, may fuel anger arousal and ongoing levels of conflict (Fondacaro & Heller, 1983; Tedeschi & Felson, 1994).

Distributive Justice

Three principles of distributive justice have been identified in the literature: equity, equality, and need. The type of distribution that is favored in a particular decision-making experience is often affected by aspects of the relationship of participants in the decision-making procedure and the goals each participant has. Equitable distributions are characterized by distribution equal to inputs (Deutsch, 1975). This perspective is often used in justice decisions involving economic issues. Relationships characterized by equitable distributions are often competitive and impersonal (Steil, 1994). Equality principles, on the other hand, are often encountered with decisions regarding interpersonal harmony and status congruence and occur most often in relationships involving solidarity, cooperation, and liking (Steil). The final dimension of distributive justice is need, which characterizes caring groups in which fostering personal development and welfare is the primary goal of interactions. In these relationships, members feel responsibility for one another and are intimately tied to each other (Deutsch).

Procedural Justice

Multiple theories of procedural justice have been described in the literature and have been tested across many different contexts. Thibaut and Walker (1975) developed one of the first theories of procedural justice. Their theory focuses on legal

decision-making. Thibaut and Walker stress judgments of control over both process and outcomes. Their instrumental control theory emphasizes process control and decision control. Process control refers to a person's control over the presentation of information or evidence to the decision-maker, whereas decision control refers to control over the actual decision made. Thibaut and Walker theorize that people care more about how they are treated during the process of conflict resolution than about the actual outcomes.

A second procedural justice theorist, Leventhal (1980), developed a more comprehensive model that includes representation, consistency, impartiality, accuracy, correctibility, and ethicality. Representation, also known as voice, means that all phases of the process must reflect the basic concerns, values, and outlooks of important subgroups in the population of individuals affected by the decision-making process. Consistency refers to the decision-making procedures being relatively invariable across persons and over time. Impartiality involves creating a level playing field by demonstrating evenhanded treatment, honesty, and lack of bias. Accuracy requires ensuring that decision-making is based on optimal levels of reliable information and an informed opinion. Correctibility is similar to the concepts of appeal or reconsideration, and is based on the existence of opportunities to modify and reverse decisions made at various points in the decision-making process. Ethicality requires treating individuals in ways that are compatible with the fundamental moral and ethical values accepted by those individuals (Leventhal).

Lind and Tyler (1988) proposed another theory of procedural justice, the group value model, which focuses on the effects of fairness of group procedures and group membership on an individual's attitudes about and behavior towards that group. Lind and

Tyler argue that although there will be differences across groups, certain values are universal to most groups (including solidarity, maintenance of authority relations, and a sense of status and security due to group membership). There also are procedures that are seen as universally fair that promote these values. These include voice (having the opportunity to provide input prior to a decision being made), dignity, and information regarding an individual's status within the group. At the core of this model is the idea that an individual expects an on-going relationship with group authorities.

Tyler (1989) attempted to incorporate Thibaut and Walker's (1975) and Leventhal's (1980) models with his own group value model and suggested a comprehensive model of procedural justice focusing on issues of neutrality, standing, control, and trust. He believes these aspects are most important to individuals in forming procedural justice judgments and comprise the core of a relational model of procedural justice (Tyler & Lind, 1992). Neutrality is impartial, evenhanded treatment and incorporates Leventhal's consistency, impartiality, accuracy, and correctibility. Trust refers to whether people have faith in the good intentions of authority figures and comes from Tyler's own model. Standing includes whether an authority figure treats a person as a valued member of a relevant group and includes Leventhal's ethicality. Control is comprised of Thibaut and Walker's process control and decision control and Leventhal's representation.

Tyler's identity-based relational model (Tyler, 1994; Tyler & Lind, 1992; Tyler & Smith, 1999; Tyler, Boeckmann, Smith, & Huo, 1997) posits that individuals care about issues like being treated with respect, being heard, and having an influence on

decision-making. The basic assumption of this identity-based relational model is that individuals are predisposed to being members of social groups (Tyler, 1994), and are very attentive to signs and symbols from others in these groups. Authority figures are particularly important group members because they communicate information about the individuals' position within the group. People are concerned about their position within a group because high status validates their sense of self, including self-esteem.

Procedural Justice in Organizational and Nonfamilial Settings

Many studies of the models of procedural justice have been conducted in organizational settings and usually consider the interactions and conflicts between workers and supervisors. One study of Tyler's model (Tyler, 1994) considered two contexts, one legal and one work-related and focused on issues of procedural and distributive justice. Respondents were residents of Chicago who were interviewed via telephone. The studies included measurements of affect regarding the resolution of the conflict. The participants were asked to evaluate the favorability of the outcome of their experience (either with the police or in the workplace), the outcome they received relative to their expectations, the outcome relative to what others would have received, and their control over decisions made. Respondents also were asked about their control over the presentation of information (process control), neutrality (measured by a scale reflecting judgments of bias, honesty, and factual decision-making), trust (assessed with a scale measuring trust in the decision-maker's motives), and standing (measured by a scale focusing on politeness and respect for the participants' rights).

Tyler tested several versions of the model to see which one best described the effect of the individuals' experiences with legal and workplace authorities on judgments of distributive and procedural justice. The models varied by the degree to which they

incorporated relational and resource concerns. Resource concerns focus on individuals' attempts to maximize rewards for themselves. Relational concerns focus on the social bonds between people and groups, institutions, and group authorities. Tyler found that the relational-dominated model fit the data best.

Results revealed that distributive justice judgments were responsive to both relational and resource concerns, while procedural justice judgments were affected only by relational concerns. Results also suggested that affect was influenced by perceptions of procedural justice, which were impacted by evaluations of trustworthiness, standing, and neutrality. These results were found for both the legal and work contexts. Tyler concluded that procedural justice judgments influence affect and willingness to accept decisions more than perceptions of distributive justice, although distributive justice judgments influence these as well. Tyler concluded that there are two psychologies of justice: one relational and one resource-based.

Tyler and Smith (1999) also described the relational model of procedural justice within organizational settings. They asserted that the groups people are members of define who they are and assist them in evaluating their worth. Tyler and Smith stated that individuals care about how they are treated by authorities independent of whether they feel they receive the appropriate outcome. Treatment by authorities affects individuals' satisfaction, their willingness to accept decisions, and their attitudes about the group (including commitment, opinions about the legitimacy of authorities, and voluntary behavior on the part of the individual that is positive for the group).

Tyler and Smith (1999) stated that individuals make assumptions about their importance to the group based on the behavior of authority figures toward them.

Individuals who perceive they are treated fairly feel favorable status and social importance. Unfair treatment makes individuals feel marginalized and excluded. The relational model asserts individuals' feelings of self-worth are affected by these feelings, which in turn affects the individuals' behavior toward the group. Tyler and Smith found that when an authority was a member of one's in-group (as is the case in the family context), perceived procedural justice affected self-esteem, especially the element of respect. Also, individuals who experienced more respect were more likely to engage in group-conforming behavior.

Tyler and Blader (2000) considered what factors affect individuals' participation and cooperative behavior in groups. They sought to explain why individuals value group membership and what groups mean to individuals. Tyler and Blader defined cooperation as whether or not individuals promoted the goals of the group and differentiated between instrumental judgments of cooperative behavior, which are motivated by rewards and punishments, and discretionary behavior (another type of cooperative behavior), which is more motivated by attitudes and internal values. Tyler and Blader put forth a four-component model of procedural justice, which they called the group engagement model. The model was tested within the work-organization setting.

Tyler and Blader found that whereas instrumental judgments affected individuals' cooperative behavior, attitudes and values were more predictive of this discretionary form of cooperative behavior. Results revealed that values affected rule-oriented behavior and attitudes affected helping behavior. The four components involved in their model included two types of procedural justice information and two sources for this information. The two types of procedural justice information are the procedures related to

the decision-making process and the procedures related to the treatment people experience during the decision-making process. The two sources of information are formal and informal. The formal bases are the formal rules and procedures of the group and are described as structural and constant across time and situation. The informal bases are the group authorities with whom the individual interacts on a daily basis. These interactions are seen as more dynamic. The model put forth by Tyler and Blader (2000) suggests that individuals receive process information on both decision-making procedures and treatment by the decision-maker, from both sources, formal and informal. Tyler and Blader's four-component model of procedural justice suggests that people involve themselves in groups to support a positive sense of themselves.

Research on procedural justice in work and organizational settings suggests that considerations of procedural fairness are dominated by relational concerns, including trustworthiness, standing, and neutrality. These studies also suggest that higher levels of perceived procedural justice are associated with higher levels of self-worth, as well as increased acceptance of group decisions and increased group conforming behavior.

Procedural and Distributive Justice in the Family

Recent studies of procedural justice within the family context may provide a framework for understanding how high levels of conflict cause adolescents to experience decreased psychological well-being, and to engage in increased deviant behavior. If adolescents perceive the procedures their parents use to resolve family conflicts to be fair, the outcome of the decision-making process may be legitimized. Jackson and Fondacaro (1999) suggest that families differ in the methods they utilize in decision-making, and that these different methods may affect family functioning and adolescent well-being. Research on parenting styles suggests that the way in which parents enforce rules and

exercise authority is tied to both family and individual adolescent functioning (Smetana, 1995). The procedural justice literature has identified a broad array of dimensions along which parental strategies and practices for resolving conflicts with their adolescent offspring may be evaluated (Leventhal, 1980; Thibaut & Walker, 1975; Tyler, 1989). Procedural justice dimensions (such as voice, status recognition, and personal respect) are reflected in a style of parenting referred to as authoritative parenting (Baumrind, 1971). Baumrind empirically confirmed that authoritative parenting is related to lower levels of deviant behavior.

Fondacaro, Dunkle, and Pathak (1998) found that older adolescents, whose parents treated them with more dignity and respect and in a more neutral and trustworthy manner, reported greater levels of overall family cohesion, lower levels of family conflict, higher levels of psychological well-being, lower levels of psychological distress, and lower levels of adolescent deviant behavior. Fondacaro and colleagues' study used undergraduate students who answered items assessing aspects of procedural justice in relation to a recent dispute the adolescent had with his or her parents.

Fondacaro and colleagues suggested their results indicated being treated disrespectfully by parents might create an atmosphere of family conflict and lack of trust between parents and children, which in turn, might disrupt formation of cohesive relationships in the family. Dispute-resolution procedures regarded by adolescents as unfair may have implications for the development of deviant behavior. Perceived injustice may lead to increased risk for anger arousal, which in turn, may lead to increased risk for violent behavior both within and outside the family context (Fondacaro & Heller, 1990; Tedeschi & Felson, 1994). Tyler's identity-based relational model, which

proposes that fair treatment is considered to be a sign that the person is a respected member of the group (Tyler, 1994; Tyler & Lind, 1992; Tyler et al., 1997), suggests that children may feel they are treated as less valued members of the family if they perceive that their parents treat them unfairly.

Tyler, Degoe, and Smith (1996) also looked at conflict within the families of older adolescents. College students were asked about a recent conflict with one or both of their parents that was resolved. Tyler and colleagues assessed individuals' perception of the respect they felt within the group and the pride they felt in the group. They found that pride and respect were two different constructs. They also found that relational judgments (focusing on social bonds), separate from instrumental judgments (motivated by rewards and punishments), were related to procedural justice. Instrumental judgments were also related to perceptions of procedural justice, but less so than relational judgments. Relational judgments were associated with respect and pride. Pride and respect were also associated with compliance within the group and self-esteem. Respect was found to be more influential on self-esteem than pride, however.

Tyler and colleagues concluded that their results supported their model. They showed that relational components of fairness evaluations of group authorities were more strongly related to attitudes and behaviors than were instrumental components. These relational concerns were most strongly related to feelings of pride and respect. Feelings of pride and respect affected compliance with group rules, group commitment, and extrarole behavior directed at groups. Tyler and colleagues also found that procedures communicated information relevant to the individual's identity. Self-esteem was affected by relational judgments, specifically pride and respect. Tyler and colleagues also asserted

that unfair treatment by parents occurs in an ongoing relationship with their children, and that this perception of ongoing unfair treatment may be more personally meaningful than unfair treatment that occurs only one time in other contexts. Decisions made by parents and children also may be more influential in the lives of adolescents than decisions made in other settings.

Fondacaro and colleagues attempted to adapt a comprehensive set of procedural justice dimensions to the context of family decision-making, and to predict adolescent deviant behavior with these procedural justice measures (Jackson & Fondacaro, 1999). The sample included university students between the ages of 18 and 22 who were predominately European American. Participants completed a questionnaire battery that included a demographic sheet, the Family Decision Making Questionnaire (FDMQ), the Family Environment Scale (Moos & Moos, 1986), and outcome measures assessing deviant behavior (Ebata & Moos, 1991).

Jackson and Fondacaro (1999) used factor scores representing distinct facets of the procedural justice construct (personal respect, standing/status recognition, and instrumental participation) to predict deviant behavior. Of the three factors, personal respect and standing/status recognition were found to independently predict deviant behavior, even after controlling for gender and level of family conflict. Older adolescents who reported their parents treated them with less personal respect and as less valued members of the family reported higher levels of deviant behavior.

Jackson and Fondacaro (1999) concluded that general levels of family conflict and specific parenting practices during conflict resolution affect adolescents' well-being. Children who perceive they are being treated unfairly and are not being respected as

individuals may be likely to lash out. Jackson and Fondacaro concluded that the practical application of procedural justice theory to parenting is that parents can be taught conflict-resolution practices that treat children with respect, are nondiscriminatory, and assure children they are valued family members. They also suggested that it is important to look at both whether people feel they are treated with respect as individuals and as respected members of the family. The importance of being treated as an individual versus being treated as a valued member of a family may be culturally based. It has been found that individuals who are likely to respond to negative feedback as relevant to their personal identity are more likely to respond to negative feedback with anger arousal and aggression (Cheek & Briggs, 1982).

Diamond and colleagues (Diamond, 2001; Diamond, Luescher, & Fondacaro, 2000) adapted the Family Justice Inventory (Fondacaro, Jackson, & Luescher, 2002) for use with a group of younger adolescents (ages 11-18 years), producing the youth version of the Family Justice Inventory (FJI-Y). Diamond and colleagues attempted to determine the relationships among procedural and distributive justice constructs and family cohesion, family conflict, psychological well-being, psychological distress, and deviant behavior in younger adolescents. The sample included participants whose mean age was 14.6 years.

The participants were in regular education schools and completed a demographic sheet, the Family Decision Making Questionnaire Youth Form (FDMQ-Y), the Family Environment Scale (Moos & Moos, 1986), the Daily Problems and Health-Youth Form (DPH-Y; Ebata & Moos, 1991), and the Aspects of Identity Questionnaire, Version IIIx (AIQ-IIIx; Cheek & Tropp, 1994). Administration of the FDMQ-Y was the same as

reported in Fondacaro et al. (2002). The Family Relationship Inventory assessed the current quality of social relationships within the family and was comprised of the cohesion, conflict, and expressiveness scales of the Family Environment Scale. The DPH-Y measured adolescents' psychological well-being, psychological distress, and deviant and aggressive behavior.

Results revealed the procedural justice indices were more related to cohesion than conflict, and were also related to psychological well-being and psychological distress. Consistency, dignity, standing/status recognition, trust, and voice were all negatively related to deviant behavior. In predicting global procedural fairness, the procedural justice subscales predicted 87% of variance, with accuracy, neutrality, and trust accounting for unique variance. The procedural justice variables accounted for 36% of the variance in cohesion and 27% of variance in family conflict. Correction was found to be the best predictor of both cohesion and conflict, suggesting perceptions of family interactions may be most affected by the adolescent having or not having the opportunity to appeal the decision that is being made. Procedural justice accounted for 15% of the variance in psychological well-being, with correction and process control as the best predictors. Procedural justice accounted for 13% of variance in psychological distress. Again, process control was the best predictor. Finally, 7% of the variance in deviant behavior was predicted by the procedural justice dimensions, with consistency as the best predictor.

These results differed from studies of older adolescents where trust was the best predictor of both deviant behavior and family conflict/cohesion. It may be that as children develop and mature, what becomes the most important aspect of the decision-making

process changes. These results suggest that younger adolescents want to feel more in control of the decision-making process; whereas older adolescents may realize that parents have the final say, so they want to know they can trust their parents to make the right decision.

When the dimensions of procedural and distributive justice were combined in one model, 40% of the variance in cohesion and 25% of the variance in conflict was accounted for. Correction independently predicted both. Diamond (2001) concluded that the FJI-Y is a reliable measure as demonstrated by internal consistency and inter-rater reliability. Diamond also suggested that having control over decision-making or the final decision in family conflict resolution is not related to adolescents' sense of happiness and self-worth because decision control, process control, and distributive justice constructs were not related to well-being. It appears adolescents are more likely to experience depression and anxiety when procedural injustice is perceived. Deviant behavior is likely to occur when decisions are handled in an inconsistent manner across persons or over time. Also, adolescents whom their parents treat with less respect, status recognition, trust, and voice in resolving family conflicts are more likely to engage in deviant behavior.

Research in procedural justice thus far has confirmed that perceptions of procedural justice affect perceptions of outcome fairness and satisfaction and that having voice in the decision-making process increases perceptions of fairness. The research also suggests that individuals develop ideas about themselves based on the treatment that they receive from others, especially others from the individuals' in-groups. One problem with much of the procedural justice literature is that in many studies, the authors develop their own

measures of procedural justice. These measures are therefore not validated across related studies. The field needs more standardized measures of procedural justice. A second shortcoming of most of the procedural justice research is that it has focused on legal and workplace decision-making and conflict resolution. More attention needs to be paid to procedural justice concerns in other extralegal and informal contexts such as the family environment. General research on procedural justice suggests that justice considerations will motivate behavior and affect values within the family context. The research focusing on procedural justice in the family context has revealed higher levels of perceived procedural justice (including higher levels of personal respect and status recognition) are associated with higher levels of psychological well-being and family cohesion and lower levels of family conflict, psychological distress, and deviant behavior.

Summary and Hypotheses

The literature on family functioning suggests that low to moderate levels of family conflict are to be expected during adolescence; however, higher levels of prolonged family conflict have been associated with decreased psychological well-being and increased deviant behavior by adolescents. The present study attempts to investigate the nature of family conflict resolution in families of adolescents, and to compare the family functioning in families of adolescents reporting different types of deviant behavior (status, nonviolent, and violent offenses).

Fondacaro and colleagues (Fondacaro et al., 2002) have developed a working model of parent-adolescent conflict which integrates related research in the areas of family functioning, procedural justice, and psychosocial adaptation. The present study builds on and extends this work by incorporating concepts and research on identity orientation into the model. The extended model is outlined as follows:

Levels of family functioning and adolescents' perceptions of procedural justice are likely reciprocally related, that is, high levels of family conflict and low levels of family cohesion both affect and are affected by low levels of perceived procedural justice. In turn, low levels of perceived procedural justice leads to anger arousal, which increases adolescents' risk for deviant (including aggressive) behavior. The present study explored the relationship between family functioning and perceptions of procedural justice. The possible reciprocal relationship of these variables were not be tested in the present study.

Additionally, some specific aspects of adolescents' perceptions of procedural justice are more strongly related to anger arousal and risk for deviant and aggressive behavior. That is, adolescents who perceive that they are not being treated with personal respect, and are not given status recognition or voice in decision-making, are more likely to become angry and to engage in aggressive behavior.

Finally, adolescents' major identity orientation (i.e., personal or collective) should moderate the degree to which specific facets of perceived procedural justice (e.g., personal respect and status recognition) are related to deviant and aggressive behavior. For those adolescents whose identity orientation is primarily personal, perceptions of low personal respect should be most closely tied to anger arousal and deviant behavior. In contrast, low status recognition should be most closely associated with anger arousal and deviant behavior in those adolescents whose identity orientation is primarily collective.

Based on this model, the following hypotheses were tested using two different samples in two studies. The initial goal of Study One was to compare adolescents who are involved with the juvenile justice system with adolescents who are not involved in the juvenile justice system. Due to the small number of system-involved adolescents who

participated in Study One, as well as the small size of the entire sample in that study, those comparisons were not feasible. The data from Study One tested Hypotheses 1 through 5. Because of the small sample size in Study One, a second, larger sample of adolescents was included as Study Two and tested Hypotheses 2, 3, 5, and 6.

- **Hypothesis 1:** Adolescents who report that their parents treated them unfairly in resolving a specific family dispute (low global procedural fairness) will report low levels of general family cohesion and high levels of general family conflict, even after controlling for the intensity of the specific family dispute (Diamond et al., 2000; Fondacaro et al., 1998; Fondacaro et al., 2002; Holmbeck & O'Donnell, 1991; Noller, 1994).
- **Hypothesis 2:** Adolescents who report that their parents treated them unfairly (low global procedural fairness) will report high levels of anger arousal and deviant behavior (including aggressive behavior) (Baumrind, 1971; Fondacaro & Heller, 1990; Fondacaro et al., 1998; Holmbeck & O'Donnell, 1991; Jackson & Fondacaro, 1999; Montemayor, 1986; Noller, 1994; Tedeschi & Feldson, 1994).
- **Hypothesis 3A:** For adolescents, feeling disrespected as individuals (low personal respect) will be more closely related to overall perceptions of fairness (low global procedural justice) than will feeling disrespected as a family member (low status recognition) (Fondacaro et al., 2002; Luescher, Fondacaro, & McNatt, 2001).
- **Hypothesis 3B:** Adolescents who report that their parents did not respect them as individuals (low personal respect) or as respected members of the family (low status recognition) will report higher levels of anger arousal.
- **Hypothesis 3C:** Also, the relationship between fairness (global procedural justice) and anger arousal will be mediated by personal respect and status recognition (Diamond et al., 2001; Fondacaro et al., 2002; Lind & Tyler, 1988; Tyler, 1989, 1994; Tyler & Blader, 2000; Tyler & Lind, 1992; Tyler et al., 1997; Tyler & Smith, 1999).
- **Hypothesis 4A:** For adolescents who report they are more focused on personal identity issues (personal identity orientation), reports of not being respected as individuals (low personal respect) by parents will be more closely tied to higher levels of anger arousal and deviant behavior (Berzonsky, 1994; Cheek 1982/83, Cheek & Tropp, 1994; Cheek et al., 1994; Diamond et al., 2000; Hogan & Cheek, 1983; Jackson & Fondacaro, 1999; Lind & Tyler, 1988; Tyler, 1989, 1994; Tyler & Blader, 2000, Tyler & Lind, 1992; Tyler & Smith, 1999, Tyler et al., 1997).
- **Hypothesis 4B:** For adolescents who report they are more focused on collective identity issues (collective identity orientation), reports of not being respected as

family members (low status recognition) by parents will be more closely tied to higher levels of anger arousal and deviant behavior.

- **Hypothesis 5A:** Adolescents who report that they did not have any input in the process of resolving a specific family dispute (no voice) will report higher levels of deviant behavior (Diamond et al., 2001; Fugilini, 1998; Holmbeck & O'Donnell, 1991; Nucci & Lee, 1993; Smetana, 1988, 1989, 1995; Smetana et al., 1991; Tyler & Blader, 2000).
- **Hypothesis 5B:** The level of voice reported will mediate the relationship between fairness (global procedural justice) and deviant behavior.
- **Hypothesis 6A:** Adolescents who report engaging in violent offenses will report lower scores than adolescents reporting nonviolent offenses (including status offenses) or no deviant behavior on various subscales measuring specific facets of the procedural justice construct, including personal respect, status recognition, and voice (Dishion et al., 1995; Patterson, 1982).
- **Hypothesis 6B:** Adolescents reporting nonviolent offenses will also report lower scores on these measures than adolescents who report no deviant behavior. These results will be revealed because lower scores on these subscales indicate more coercive parenting and family interactional styles.

CHAPTER 3 METHODS

Study One

Participants

Study One included 23 adolescents between the ages of 13 and 16 years. Participants were recruited through middle/junior high schools and community centers in Lucas County, Ohio, as well as through the Lucas County Juvenile Court Community Detention program (5 participants). The original focus of the present study was a comparison of a sample of adolescents involved in the juvenile justice system (i.e., system-involved adolescents) with a sample of adolescents who were not involved in the juvenile justice system (i.e., non-system-involved adolescents). Therefore, system-involved adolescents were recruited through the Community Detention program, which is held in a Lucas County community center. Adolescents are assigned to one of two levels in the program: (1) those in the higher level (adolescents who require more supervision) report to the community center 6 days per week for 34 to 51 hours of programming per week; (2) those in the lower level (adolescents who require less supervision) attend 6 hours of programming per week at the community center and are contacted in person or via telephone twice per day by Community Detention staff. Community Detention programming includes cognitive behavior management, tutoring, basic living skills, a job readiness course, drug testing, and group discussions (Juvenile Division of the Lucas County Court of Common Pleas, 2002).

The recruitment through the Community Detention program was unsuccessful, and only five adolescents chose to participate in Study One. The data for those five participants were included and analyzed with the data for the non-system-involved adolescents in Study One. The results and discussion for Study One focus on the relationships among the procedural justice indices and anger arousal/deviant behavior, but do not include comparisons for system-involved and non-system-involved adolescents. Those adolescents recruited through the schools and community centers who returned an Informed Consent form signed by their parents or guardians, whether agreeing or declining to participate in Study One, received either a pizza party or gift certificates for pizza.

Written informed consent from parents and written assent from each adolescent (Appendix A) was obtained prior to participation in Study One. Each participant completed a pencil and paper measure (Appendix B) in a group format (with the exception of two adolescents who participated through the Community Detention program) at either his or her school or community center.

Participants completed a demographic measure that included the following information: gender, grade, school, age, ethnicity, marital status of parents, occupation and education of mother and father, questions about who lives in the home with the adolescent, and questions focusing on whether the adolescent has ever been arrested, spent the night in the juvenile detention center, or been found guilty of a crime.

Instruments

Family Decision Making Questionnaire-Youth form (FDMQ-Y)

In Study One, a revised form of the Family Decision Making Questionnaire-Youth Form (FDMQ-Y) including the items that comprise the Family Justice Inventory-Youth

Version (FJI-Y) was used. The present version was revised to include a reduced number of items (some of which were re-worded to make them more comprehensible for younger, middle school students). The measure includes 70 items in four sections. The first section asks the participant to describe a conflict situation that occurred with one or both parents or guardians within the last 12 months, and to answer four yes/no and open-ended response format questions about the specifics of that conflict (i.e., family members involved in the conflict; whether or not the conflict was resolved; and if so how long it took to resolve). The second section contains questions concerning procedural justice items and the third section contains distributive justice items. The fourth section asks the participant how the treatment he or she received in the conflict situation made him or her feel. Responses to the questions in parts two through four are likert scale responses ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

To control for the severity of the family conflict listed in the analyses, two independent graduate student raters were used to rate the intensity of the conflicts described by the adolescents (ranging from *Low*, to *Medium*, to *High* levels of conflict). Definitions for *Low*, *Medium*, and *High* levels of conflict, as well as sample conflicts for each level, were provided to the raters (Appendix C). Interrater agreement and interrater reliability were determined by calculating intraclass correlations.

The procedural justice items used in this version of the FDMQ-Y were previously used in a study by Miller et al. (2003). There are 8 procedural justice subscales made up of one or three items each: Consistency, one item ("Your parent(s) treated you worse than others because of your personal characteristics (for example, age, gender, etc)," reverse scored); Correction, one item ("Any wrong decisions in this situation could be easily

corrected.”); Personal Respect, three items (sample item, “Your parent(s) showed a lot of kindness and understanding.”); Neutrality, one item (“Your parent(s) were equally fair to everyone involved.”); Process Control-Voice, three items (“You had an opportunity to tell your side of the story.”); Standing/Status Recognition, three items (“Your parent(s) probably gave you less respect than they would have given to other family members,” reverse scored); Trust, three items (“Your parent(s) were truthful to you.”); and Global Procedural Fairness, one item (“Overall, your parent(s) treated you fairly.”). Scores for the three item procedural justice subscales were calculated by using the mean of the three items for that subscale. Each subscale score ranged from 1 to 5.

There also are two distributive justice subscales made up of three items each: Outcome Fairness (sample item, “Overall, things turned out the way they should have.”) and Outcome Satisfaction (“This situation turned out exactly how you hoped it would.”). Scores for the distributive justice subscales also were calculated by using the mean of the three items for that subscale.

The alpha reliabilities for the three-item procedural justice subscales from the sample in the Miller et al. (2003) study were as follows: Personal Respect = .82; Process Control-Voice = .67; Standing/Status Recognition = .68; Trust = .86. The alpha reliabilities for the two distributive justice scales, reported in Diamond (2001) were Outcome Fairness = .94 and Outcome Satisfaction = .91. Diamond reported that the FJI-Y is a reliable measure based on both adequate internal consistency and interrater agreement greater than chance.

Family Relationships Index of the Family Environment Scale (FRI)

This instrument measures family functioning and the quality of current familial relationships (Holahan & Moos, 1982, 1983). It is comprised of 27 true-false items and

three subscales (Cohesion, Conflict, and Expressiveness). Holahan and Moos report an internal consistency of .89. For Study One, separate scores were calculated for the Cohesion and Conflict subscales. The Cohesion subscale measures how supportive and helpful family members are to one another. A sample item from this subscale is “Family members really help and support one another” and the internal consistency for the subscale reported in Fondacaro, Dunkle, and Pathak (1998) was .75. The Conflict subscale focuses on the degree to which anger and physical aggression are expressed in the family. One item from this subscale is “We fight a lot in our family” and the internal consistency reported for this subscale was .75 (Fondacaro et al., 1998).

The original Family Environment Scale, of which the FRI is one part, has been found to have good validity in multiple studies (Holahan & Moos, 1982). For example, it has been found to discriminate healthy from disturbed families. Holahan and Moos reported that the FRI has good construct validity as compared with other measures of social support and in its relationship to outcome indices.

Measure of psychosocial functioning

These items were compiled by Ebata and Moos (1991) and measure psychological well-being, psychological distress, and deviant behavior. The items measuring deviant behavior were not included in Study One. The items on the Psychological Well-Being subscale are actually comprised of items from subscales from two other measures. The first is the Happiness subscale of the Weinberger Adjustment Inventory (Kanner, Feldman, Weinberger, & Ford, 1987; Weinberger, 1989) (sample item “No matter what I am doing, I usually have a good time.”). There are seven of these items with likert response choices ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*), which were scored by summing across the seven items. The second measure is the General

Self-Worth scale of the Harter Self-Perception Profile (Harter, 1982, 1986). This scale is made up of five items ("Some teenagers are often disappointed with themselves.") that were scored on a likert scale from 1 (*Not true for me*) to 4 (*Really true for me*).

Internal consistency was reported for the Psychological Well-Being subscale as .89, for the Happiness subscale of the Weinberger Adjustment Scale as .87, and for General Self-Worth scale as .84 (Ebata & Moos, 1991; Fondacaro et al., 1998). The Psychological Well-Being subscale was calculated by standardizing the Happiness and General Self-Worth subscales (mean 0, standard deviation 1), summing them, and restandardizing them (mean 50, standard deviation 10).

The Psychological Distress subscale (alpha .79, Fondacaro et al., 1998) is comprised of the Depression subscale from the Weinberger Adjustment Inventory (Kanner et al., 1987; Weinberger, 1989) (sample item, "I feel that nobody really cares about me the way I want them to."; alpha = .83) and the Spielberger State Anxiety Scale (Spielberger, 1973) ("I feel very calm/calm/not calm."; alpha = .91) (Ebata & Moos, 1991). There are seven items on the Depression subscale rated on a likert scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). This subscale was calculated by summing the seven items. The State Anxiety Scale is comprised of 10 items that are on a 3 point likert scale and scored by summing the ten scores. The Psychological Distress Subscale was calculated by standardizing the Depression and State Anxiety Scales (mean 0, standard deviation 1), summing them, and restandardizing them (mean 50, standard deviation 10).

Aspects of Identity Questionnaire, Version IIIx (AIQ)

This instrument measures identity orientations (Cheek, 1982/83; Cheek, & Tropp, 1994; Cheek, Tropp, Chen, & Underwood, 1994). There are three subscales on this instrument (Personal, Social, and Collective), which were calculated by summing the

items on each subscale. There are ten personal identity items, seven social identity items, and ten collective identity items. Item responses are rated on a likert scale from 1 (*Not important to my sense of who I am*) to 5 (*Extremely important to my sense of who I am*). Items from each of the subscales include questions like “My personal values and moral standards (. . . are important/not important to my sense of who I am)” (Personal), “My popularity with other people” (Social), and “Being part of many generations of my family” (Collective).

Internal consistency for each of three scales was reported as follows:

Personal = .84, Social = .86, and Collective = .68 (Cheek & Tropp, 1994; Cheek et al., 1994). Cheek and colleagues also reported 60 day test-retest reliabilities for the three subscales: Personal = .77, Social = .77, and Collective = .81.

Self-Report Delinquency Scale (SRDS) and alcohol and drug use measure

This instrument measures delinquent and criminal behavior as well as alcohol and drug use the individual has engaged in during the last year and was originally developed for the National Youth Survey (Elliott, Huizinga, & Menard, 1989). With the exception of homicide, all of the index offenses (for example, aggravated assault, grand theft, robbery, and burglary) are covered in the instrument, as well as Uniform Crime Report Part II offenses (misdemeanor offenses) and status offenses. The alcohol and drug use items were modified somewhat for this survey by changing the example names for some of the drugs to fit current slang, and by adding two questions regarding ecstasy and inhalants that were not originally included in the survey. The examples currently included in the measure were provided by an Alachua County, Florida Sheriff's Deputy who is a Narcotics Officer and has contact with adolescents.

There are 38 delinquency items (sample item: "How many times in the last year have you 'Purposely damaged or destroyed property belonging to your parents or other family member?' ") and 9 alcohol and drug use items ("How often in the last year have you used 'marijuana-hashish ('weed' 'pot' 'crip')' ") all rated on a likert scale from 1 (*Never*) to 5 (*Often*). To calculate scores, means were calculated separately for the delinquency items and for the alcohol and drug use items. To measure age of onset of delinquent behavior, students were asked "If you did any of the things described in questions 16 through 62, how old were you the *first time* you did it?"

Elliott and Ageton (1980) reported internal consistency of the SRDS as .91 in the 1977 wave of the National Youth Survey. Validity for the SRDS and Drug Use Scales was assessed in a number of ways (Elliott, Dunford, & Huizinga, 1989). First, by analyzing the detailed follow-up questions to determine if the self-report responses were eliciting the appropriate response. Second, through an analysis of the proportion of reported behaviors that would be seen as too trivial to actually be considered delinquency. Third, using a comparison of self-report with arrest records. Fourth, through an analysis between these self-report measures and predictor variables.

Results showed 96% of responses to follow-up questions confirmed the accuracy of the self-report responses and 76% of all responses were considered delinquent acts. Also, 80% of arrests in a given year matched the self-report of participants. Results of validity analyses also showed the pattern among predictor variables and delinquency and drug use items were as expected across various demographic groups. Validity also was assessed for the Drug Use Scales by comparing the rates of alcohol and drug use found in the National Youth Survey with those found in the Monitoring the Future Study (Johnston,

Bachman, & O'Malley, 1979). The prevalence estimates were found to be similar across the two studies for both alcohol and drug use.

Analyses

All of the analyses in Study One were tested at the .05 level of significance. Hypotheses 1, 2, 3, and 5 were tested using regression analyses. Hypothesis 4 was tested using analysis of covariance (ANCOVA).

Study Two

Due to the small number of participants in Study One, the hypotheses for the present study also were tested using an additional data set. The data used for Study Two was originally collected as part of grant from the United States Department of Education. The purpose of that study was to create a survey instrument for use with middle school students to assess social factors and psychosocial characteristics associated with youth violence for use by educational policy makers (Miller et al., 2003).

Participants

Study Two included 3,230 students in sixth, seventh, and eighth grade. Due to missing data on one or more of the scales used in Study Two, 628 adolescents were excluded from the analyses. The final sample included 2,602 adolescents between the ages of 10 and 16 years. Participants were recruited through middle/junior high schools across the country in five states. The number of schools that participated in Study Two with their corresponding city and state were as follows: one school in Gainesville, FL; one school in Havana, FL; three schools in Tampa, FL; seven schools in Miami, FL; two schools in Beaumont, TX; two schools in Galveston, TX; one school in Liberty, TX; five schools in Los Angeles, CA; two schools in Waterbury, CT; and three schools in Trenton, NJ. Schools were paid two dollars for each completed parental informed consent form

(either agreeing to participate or declining to participate in Study Two) returned by the students.

Written informed consent from parents and oral assent from each student (Appendices D and E) were obtained prior to adolescents participating in Study Two. Each participant completed the survey in a scantron format, within groups at their school. Participants completed a demographic measure that included the following information: gender, grade, age, ethnicity, average grades last year, and occupation and education of mother and father.

Instruments

The survey included a battery of measures. The following were utilized in Study Two: the Self-Report Delinquency Scale (SRDS; Elliott, 1983; Elliott, Huizinga, & Menard, 1989); the Family Decision Making Questionnaire Youth Form (FDMQ-Y); and the Massachusetts Youth Screening Instrument, Second Version (MAYSI-2) Angry-Irritable scale.

Family Decision Making Questionnaire-Youth form (FDMQ-Y)

In Study Two the FDMQ-Y, as described in Study One, also was used. This version included the eight procedural justice scales. It also included two, one-item distributive justice scales (Outcome Fairness and Outcome Satisfaction). This version did not include the other items that make up the Family Justice Inventory-Youth Form (FJI-Y), as described as the fourth section of the FDMQ-Y in Study One.

Self-Report Delinquency Scale (SRDS)

The version of this measure used in Study Two was a shortened form of the measure as described in Study One. This version excluded the alcohol and drug use items, as well as the deviant behavior items associated with drug distribution ("Sold

marijuana or hashish” and “Sold hard drugs, such as cocaine and heroin”). This version also excluded three other items: “Been paid for having sexual relations with someone,” “Taken a vehicle for a ride (drive) without the owner’s permission,” and “Had (or tried to have) sexual relations with someone against their will.” The version included 33 items rated on a likert scale from 1 (*Never*) to 5 (*Often*) measuring how often in the last year the student had engaged in these behaviors. A mean score was calculated for the 33 items.

Adolescents in Study Two were divided into three groups based on their SRDS scores. The groups were defined based on a method similar to used by Gorman-Smith, Tolan, Zelli, and Huesmann (1993). They used the following three groups: those adolescents reporting only minor (status offense only) or no delinquency in the last year; those reporting participation in some nonviolent delinquent behaviors, but no acts of violence towards another person within the last year; and those reporting some violent offending within the last year. Similar groups were used in Study Two, with the exception that status offenses were included with the nonviolent offenses. Therefore, the three groups used in Study Two, based on SRDS scores, were (1) adolescents who reported engaging in no offenses in the last year; (2) adolescents who reported engaging in nonviolent offenses, including status offenses or other minor delinquency, in the last year; and (3) adolescents who reported engaging in violent offenses in the last year (as well as possibly reporting engaging in status offenses and nonviolent offenses).

To determine which group an adolescent was placed in, a number of steps were followed. First, adolescents who scored less than 2 on all the mean of all of the SRDS items (corresponding to a score of *Never* on the mean of all 33 items) were placed in the first group, the No Offense group (NO). Second, for the remaining participants, a mean

score on a violent offense subscale of the SRDS was computed (the items for this scale are in Appendix F). Adolescents who had a mean score of 2 or above (corresponding to *Seldom to Often*) on the violent offense scale were placed in the third group, the Violent Offense group (VO). The remaining adolescents were placed in the second group, the Status Offense/Nonviolent Offense group (NVO).

Massachusetts Youth Screening Instrument-Second Version (MAYSI-2)

The Angry-Irritable scale of the MAYSI-2 includes nine items in a *Yes No* format. Students are asked to respond to items based on their feelings and experiences over the last few months. Sample items include “In the last few months have you lost your temper easily, or had a ‘short fuse?’ ” and “. . . hurt or broken something on purpose, just because you were mad?” Grisso, Barnum, Fletcher, Cauffman, and Peuschold (2001) reported the development and psychometric properties of the MAYSI-2. The measure was created for assessment of psychological distress and/or problematic behaviors in youth charged with or convicted of delinquent behaviors. The measure was created using a sample of 12 to 17 year olds in juvenile justice settings in Massachusetts, and further psychometric data was assessed using a California sample of post-adjudicated youth.

Internal consistency for the Angry-Irritable scale in the Grisso et al. (2001) study for the Massachusetts and California samples (including the gender and ethnic subsamples within both the Massachusetts and California samples) ranged from .79 to .88. The internal consistency of the scale in the Miller et al. (2003) sample was .78. Test-retest reliability was assessed for a subsample of the Massachusetts sample in the Grisso et al study. Boys were retested an average of 8.6 days after the first administration and girls an average of 5.6 days later. The test-retest intraclass correlations were between .53 and .89, with the most of the scales for both genders falling between .73 and .89.

Concurrent validity was assessed by comparing the adolescents' scores on the MAYSI-2 with scores on the Millon Adolescent Clinical Inventory (MACI, measuring personality characteristics and clinical syndromes) and the Achenbach Youth Self-Report Form (YSR, measuring problem behaviors). Grisso et al. reported adequate concurrent validity for the MAYSI-2 with these two scales.

Analyses

All of the analyses in Study Two were tested at the .05 level of significance. Hypotheses 2, 3, and 5 were tested using regression analyses. Hypothesis 6 was tested using multivariate analysis of covariance (MANCOVA).

In Hypotheses 3 and 5, in which a mediation mechanism was proposed, Structural Equation Modeling (SEM) also was conducted. SEM models were specified using Maximum Likelihood Estimation in AMOS 5 Student Version (Arbuckle, 2003). The models were analyzed using the covariance matrix. Standardized estimates were reported for the models to facilitate comparison of the values of path estimates within the model. Standardized path estimates are interpreted like regression standardized beta weights (Kline, 1998).

The following goodness of fit indices were used to test the fit of all models: Chi-square, Chi-square/degrees of freedom, Chi-square difference test (as needed), GFI, CFI, TLI, SRMR, and RMSEA. In SEM analyses, the Chi-square statistic compares the observed covariance matrix and the predicted matrix based on the model. A large, significant Chi-Square statistic indicates a lack of fit of the data to the model (Kline, 1998). This index is dependent on sample size and significant Chi-square statistics are more likely with large samples. Many researchers suggest using the value of the

Chi-square statistic divided by the degrees of freedom (Arbuckle, 1997; Kline). If this value is 3.00 or less, the model is considered to adequately fit the data.

The SEM literature suggests using a number of preselected fit indices to test models because no one measure can adequately indicate the fit of the model to the data. The following fit indices were selected for Study Two. The GFI, Goodness of Fit Index (Jöreskog & Sörbom, 1984), is a measure of absolute fit. It measures the relative amount of the variances and covariances in the sample model accounted for by the implied model (Hu & Bentler, 1995). GFI should be 0.90 or greater to accept the model (Kline, 1998). CFI, Bentler's Comparative Fit Index (Bentler and Bonett, 1980), compares the fit of the specified model to the independence model (Kline). The independence model is one in

(personal respect, PR); and (2) being disrespected as a family member (status recognition, SR), mediated the relationship between overall appraisals of procedural fairness (GPF) and anger arousal (AA) (Figure 3-1).

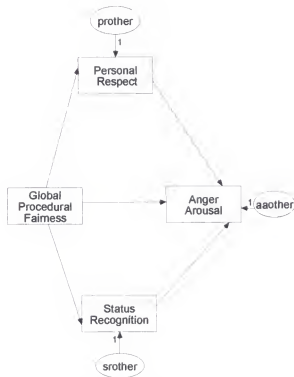


Figure 3-1. Initial path model: Partial Mediation of Personal Respect and Status Recognition on the Relationship between Global Procedural Fairness and Anger Arousal

Four observed variables were included: the exogenous variable, GPF (measured with the one item FDMQ-Y scale), and three endogenous variables (1) PR (measured with the three-item FDMQ-Y scale); (2) SR (measured with the three-item FDMQ-Y scale); and (3) AA (measured with MAYSI-2 Angry-Irritable scale). Exogenous variables are those variables whose causes are not specified in the model (Kline, 1998).

Endogenous variables are those variables that are predicted to be caused by, or associated with (at least partially), the other variables specified in the model. Two versions of the model were fitted to the data. The first was a partially mediated model, which included

direct effects from GPF to AA, GPF to PR, and GPF to SR. This model also included two indirect paths from GPF to AA via PR and SR. The second, alternative, model that was tested eliminated (constrained to zero) the path between GPF and AA to make a fully mediated model. The Partial Mediation Model and Full Mediation Model were also tested to determine which provided the better fit for the various offense-type groups.

For Hypotheses 5, a model representing the proposed mediation of having input in the decision-making process (Voice) on the relationship between overall perceptions of fairness (GPF) and deviant behavior (SRDS) was analyzed (Figure 3-2). Three observed variables were included: the exogenous variable, GPF (measured with the one item FDMQ-Y scale) and two endogenous variables (1) Voice (measured with the 3 item FDMQ-Y scale); and (2) SRDS (measured with the 33 item scale). Again, two versions of the model were fitted to the data. The first was a partially mediated model, which included direct effects from GPF to Voice and GPF to SRDS. This model also included an indirect path from GPF to SRDS via Voice. The second, alternative model that was tested eliminated (constrained to zero) the path between GPF and SRDS to make a fully mediated model. Once again, the Partial Mediation Model and Full Mediation Model were also tested for fit to the data of the three offense-type groups.



Figure 3-2. Initial path model: Partial Mediation of Voice on the Relationship between Global Procedural Fairness and Deviant Behavior

CHAPTER 4 STUDY ONE RESULTS

Demographics

Twenty-three adolescents participated in Study One. Fifteen (65.2%) of the participants were male and eight (34.8%) were female. Most of the participants were in the eighth grade (Table 4-1), and their mean age was 14.09 ($SD = 1.164$). Most of the participants were European American (Table 4-2 for ethnic breakdown of the sample). According to Hollinghead's Two Factor index of social position, which is based on mother or father's education level and current occupation, most of the participants (76.2%) were in the third and fourth levels (with the first level corresponding to high social position and the fifth level corresponding to low social position). Most of the participants lived with their biological mother (95.5%) and nearly two-thirds (68.2%) lived with their biological father (Table 4-3).

Participants for Study One were recruited through schools, community centers, and the Community Detention program of the Lucas County Juvenile Court. Few adolescents from the Community Detention program (5 adolescents) chose to participate in Study One. Demographic data regarding involvement in the juvenile justice system was collected from all adolescents. For those five participants recruited through the Community Detention program, the mean number of lifetime arrests was 4.50 ($SD = 4.123$) and the mean number of lifetime stays in detention was 2.20 ($SD = 2.387$). Only one participant reported being adjudicated delinquent or found guilty by a court on one occasion.

Analyses

Due to barriers to recruitment through Lucas County schools and low return rates for parental consent forms for recruitment through the Community Detention program and community centers, the sample size for Study One was extremely small. Smaller samples often produce low levels of power, which make it difficult to attain significant results in empirical studies. Power refers to the probability of rejecting the null hypothesis for a given sample size, effect size, and significance criterion (alpha level) (Cohen, 1992). Many of the analyses for Study One were found to be nonsignificant, indicating that the results were not consistent with the hypotheses. A nonsignificant result does not necessarily mean that the phenomenon of interest is not present, rather that Study One was not able to produce significant findings consistent with the phenomenon of interest.

These nonsignificant findings included the analyses to assess Hypothesis 2 (focusing on the relationship between global procedural fairness and both delinquent behavior and drug use), some of the analyses related to Hypothesis 3 (those focusing on the relationships among negative emotional response, personal respect, and status recognition and the mediation analyses focusing on the relationships among personal respect/status recognition, anger arousal, and global procedural fairness), some of the moderation analyses for Hypothesis 4 (all of the analyses focusing on high personal identity orientation and the analysis focusing on the effect of high collective identity orientation on the relationship between high status recognition and anger arousal), and the analyses for Hypothesis 5. These nonsignificant results may have been due to low power caused by the small sample size in Study One.

Alternatively, they may have been nonsignificant in their own right as well, not because of insufficient sample size, but because the hypotheses would not have been supported even with an adequate sample size. For either reason, future studies with adequate power will need to be conducted to reassess the significance of those relationships in Study One that failed to reach significance.

Study Two provided an opportunity to test, in a large sample, hypotheses that were similar to some of the hypotheses proposed, but not fully addressed, in Study One. However, before turning to Study Two, it should be noted that some of the results of the analyses relevant to the hypotheses in Study One were significant. Although these significant findings suggest that the power was adequate to test these hypotheses in this specific sample (Study One), these results are based on a very small sample and will need to be replicated in future studies (in addition to Study Two). Future studies can verify that these findings are stable and are not idiosyncratic to the Study One sample. Overall, the significant findings of Study One should be considered exploratory in nature.

Family Cohesion and Global Procedural Fairness

Hypothesis 1 focused on the relationships between family cohesion/family conflict and global procedural fairness. For this hypothesis, a composite measure of global procedural fairness (GPF) was used. This scale was calculated as a mean of all 16 procedural justice items. Severity of conflict also was controlled for in these analyses. Each adolescent provided a written conflict he or she recently had with one or both of his or her parents/guardians. The severity of conflict was later rated as *High*, *Medium*, or *Low*, by two independent graduate student raters. The mean of the two ratings was used as the measure of conflict severity.

Two intraclass correlations were computed: one to assess interrater agreement and another to assess interrater reliability. Interrater agreement assesses whether judges give the same score to the objects being categorized (Tinsley & Weiss, 1974). In Study One, agreement occurs when both judges assign the same rating to the conflict scenario (i.e., both give a *Low* rating for the level of conflict). Interrater reliability refers to the degree to which a judge's rating deviates from the mean of all judges ratings (Tinsley & Weiss). The intraclass correlations for interrater agreement and interrater reliability were both 1.000.

The first part of Hypothesis 1, focusing on family cohesion, was tested via a two-step hierarchical multiple regression analysis. When conflict severity was entered on the first step, the model was not significant, $F(1, 21) = .018, p = .895$. When GPF was entered on the second step, the model was significant, $F(2, 20) = 7.908, p = .003$, and accounted for 38.6% of the variance in family cohesion (Table 4-4). These results showed that adolescent perceptions of fairness in the process of resolving conflict were significantly related to perceptions of togetherness within the family, even after controlling for the severity of the conflict the adolescent reported.

Family Conflict and Global Procedural Fairness

The second part of Hypothesis 1 considered the relationship between family conflict and GPF, again controlling for conflict severity. The same GPF scale and measurement of conflict severity were used in these regression analyses. For this analysis, another two-step hierarchical multiple regression was conducted and the results were similar to those for family cohesion. The second step of the hierarchical regression was significant, $F(2, 20) = 3.635, p = .045$ and GPF accounted for 19.3% of the variance family conflict (Table 4-4). These results showed that similar to the relationship with

family cohesion, adolescent perceptions of overall fairness in resolving family conflict were significantly associated with perceptions of general conflict levels within the family (even after controlling for the severity of the specific conflict the adolescent reported).

Anger Arousal, Negative Emotional Response, and Global Procedural Fairness

Hypothesis 2 focused of the relationship between GPF and affective and behavioral indicators. In these analyses the composite measure of GPF was again used. The item measuring anger arousal referred to the conflict provided by the adolescent as part of the Family Decision Making Questionnaire-Youth Form (FDMQ-Y), and stated "The way my parents treated me made me feel angry." Negative emotional response (NER) was calculated using the mean of seven items, which all began with "The way my parents treated me made me feel" The feelings included in these items were angry, sad, embarrassed, ashamed, depressed, pleased, and proud. The pleased and proud items were reverse scored, such that higher scores on this scale indicated greater negative emotional response.

The first set of regression analyses examined the relationship between anger arousal (AA) and GPF and controlled for conflict severity. These relationships were assessed in two steps. First, a simultaneous regression analysis was conducted in which conflict severity and GPF were regressed on AA. This analysis was significant, $F(2, 20) = 8.691, p = .002$, with GPF and conflict severity accounting for 41% of the variance in AA (Table 4-5). Only GPF accounted for unique variance in AA. Second, a hierarchical regression was conducted in which conflict severity was entered on the first step and global procedural fairness was entered on the second step. The first step was nonsignificant, while the second step was significant. Once again, only GPF accounted for unique variance in AA.

The second set of regression analyses explored the relationship between NER and GPF, controlling for conflict severity, and was again conducted in two steps. Similar results were shown for both the simultaneous and hierarchical regressions as for the analyses for AA (Table 4-5). GPF and conflict severity accounted for 47% of the variance in NER and only GPF accounted for unique variance. These results showed that adolescents who perceived their parents treated them fairly in the process of resolving family conflict reported feeling less angry and had lower levels of overall negative feelings.

Personal Respect and Status Recognition

Hypothesis 3 focused on the relationships among aspects of procedural justice (personal respect (PR), status recognition (SR), and GPF) and affective outcomes (AA and NER). For these analyses, PR was measured by the mean of two items: "The way my parents treated me indicated that they respect me as a unique individual" and "... respect me as a person." SR also was measured by the mean of two items: "The way my parents treated me indicated that they saw me as being a valued son/daughter" and "... a valued member of the family." In these analyses GPF was measured with a single item of overall procedural fairness, "Overall, your parent(s) treated you fairly." This measure was used because the composite measure used in previous analyses included aspects of personal respect and status recognition and may have confounded the analyses. AA and NER were measured the same way as in Hypothesis 2.

The first part of Hypothesis 3 focused on whether PR or SR had a larger effect on GPF, while controlling for conflict severity. Four regression analyses were conducted: (1) a simultaneous entry regression including conflict severity, PR, and SR; (2) a

two-step hierarchical regression in which conflict severity was entered on the first step of the analysis, and PR and SR were entered on the second step; (3) a three-step hierarchical regression in which conflict severity was entered on the first step, PR on the second step, and SR on the third; and (4) a second three-step hierarchical regression in which conflict severity was again entered on the first step, SR on the second step, and PR on the third. These analyses showed PR had a stronger effect on GPF than did SR, even when conflict severity was controlled for (Table 4-6). In each of the four analyses, PR alone accounted for unique variance in GPF. These results showed that perceptions of being respected as an individual were more closely associated to perceptions of overall fairness than were perceptions of being respected as a family member.

The second part of Hypothesis 3 focused on the relationships among PR, SR and AA, while controlling for conflict severity. These relationships were assessed similarly to the analyses of the impact of these variables on GPF. The first equation, in which all three variables were regressed on AA was nonsignificant, but did approach significance, $F(3, 19) = 2.963, p = .058$. The three variables combined accounted for 21.1% of the variance in AA, however, none of the variables accounted for unique variance (Table 4-7). Similar results were revealed for the two-step hierarchical regression and the three-step hierarchical regression in which SR was entered on the second step.

In the three-step hierarchical regression in which PR was entered on the second step, the second step of the analysis was significant and PR accounted for unique variance in AA. However, in the third step, the equation again only approached significance and none of the variables accounted for unique variance. The results showed that even after controlling for conflict severity, adolescent perceptions of being

disrespected as an individual or as a family member were related to reported feelings of anger arousal; however, neither perception had an effect above beyond that of the other.

Identity Orientation

Hypothesis 4 focused on the relationships among personal and collective identity orientation, personal respect/status recognition, and anger arousal/deviant behavior. It was hypothesized that adolescents high in personal identity orientation would be more focused on perceptions of personal respect, and this aspect of procedural justice would therefore be more strongly related to anger arousal and deviant behavior. For those adolescents with a stronger collective identity orientation, it was suggested their focus would be more on status recognition, and this aspect would be more strongly related to anger arousal and deviant behavior for this group. These analyses tested whether or not identity orientation was a moderator variable for the relationship between PR/SR and anger arousal/deviant behavior. A moderator variable is one that affects the relation or strength of the relationship between an independent and dependent variable (Baron & Kenny, 1986).

For these analyses, the AIQ Personal Identity and Collective Identity scale scores were used. Adolescents were divided into high and low personal and collective identity based on a median split of the scores on these two scales. Because the AIQ conceptualizes the personal and collective identity scales and concepts as orthogonal, adolescents could be considered high on both the scales, low on both, or high on one and low on the other. PR and SR again were measured using the two-item scales. Participants also were divided into high and low PR and SR based on a median split on the two scales. Again, these constructs are considered orthogonal and adolescents could be high or low on both or either of the scales. AA was measured with the one item scale and the deviant

behavior measures for these analyses were the Delinquency and Drug scales from the SRDS.

Baron and Kenny (1986) described a method using Analysis of Variance (ANOVA) to test for moderation effects with dichotomous variables. To test for a moderator effect, one explores the significance of the interaction term in the ANOVA between the independent variable (in this case, High Personal Respect, HPR, or High Status Recognition, HSR) and the moderator variable (in this case High Personal Identity, HPI, or High Collective Identity, HCI). Baron and Kenny asserted that if the interaction term is significant, there is a moderator effect. Means can then be evaluated to determine the extent of the moderator effect.

A series of ANCOVAs was conducted. The covariate in the analyses was conflict severity. None of the analyses of the moderator effect of high personal identity were significant. The analysis for the moderation of high collective identity on the relationship between high status recognition and anger arousal also was not significant. A nearly significant result was found for the ANCOVA that assessed whether collective identity orientation moderated the relationship between status recognition and SRDS Delinquency scores. In this analysis, HCI was the moderating variable, HSR the independent variable, and SRDS Delinquency scores the dependent variable (Table 4-8). The results of these analyses revealed the interaction term in the analysis approached significance, $F(1, 18) = 4.163, p = .056$. In the ANCOVA focusing on SRDS Drug scores, the interaction term was significant, $F(1, 18) = 6.420, p = .021$ (Table 4-10).

The predicted relationship between SR and SRDS scores was that those adolescents who felt they were disrespected as family members would report increased delinquent

behavior and drug use. It also was hypothesized that collective identity would moderate this relationship, by making those adolescents who focused on communal aspects of identity engage in even more deviant behavior when they felt disrespected as family members. The results of the present analyses did not fit this pattern. For those adolescents low on collective identity, low levels of perceived familial disrespect were associated with higher levels of deviant behavior (as compared with high levels of perceived respect). However, for adolescents high on collective identity, low levels of perceived respect at the family level were associated with lower levels of deviant behavior (as compared with high levels of feeling respected as a family member) (Table 4-9 and 4-11). These results are opposite from the relationship predicted Hypothesis 4.

Table 4-1
Grade Level

Grade	Number	Percent
Seventh	1	4.3
Eighth	18	78.3
Ninth	1	4.3
Tenth	1	4.3
Eleventh	2	8.7

Table 4-2
Ethnic Background

Ethnicity	Number	Percent
African American	4	17.4
European American	12	52.2
Hispanic American	3	13.0
Multiracial	1	4.3
Other	3	13.0

Table 4-3
Individuals Living in the Household with Participants

Relationship	Number	Percent
Biological Mother	21	91.3
Biological Father	15	65.2
Stepmother	2	8.7
Stepfather	2	8.7
Siblings	13	56.5
Other: Grandparents	2	8.7
Other: Nephew	1	4.3

Table 4-4
Multiple Regression Predicting Family Cohesion and Family Conflict
Using Global Procedural Fairness and Conflict Severity

	Family Cohesion	Family Conflict
Conflict Severity	.005	-.268
GPF	.665 ^a	-.455 ^a
Adjusted R^2	.386 ^a	.193 ^a

Note. Entries are standardized β weights.

^a $p < .05$

Table 4-5

Multiple Regression Predicting Anger Arousal and Negative Emotional Response
Using Global Procedural Fairness and Conflict Severity

	Anger Arousal	Negative Emotional Response
Conflict Severity	.003	.100
GPF	-.682 ^a	-.708 ^a
Adjusted R^2	.411 ^a	.470 ^a

Note. Entries are standardized β weights.

^a $p < .005$

Table 4-6

Multiple Regression Predicting Global Procedural Fairness
Using Personal Respect, Status Recognition, and Conflict Severity

	Global Procedural Fairness
Conflict Severity	.034
PR	1.163 ^a
SR	-.332
Adjusted R^2	.734 ^a

Note. Entries are standardized β weights.

^a $p = .000$

Table 4-7

Multiple Regression Predicting Anger Arousal
Using Personal Respect, Status Recognition, and Conflict Severity

	Anger Arousal
Conflict Severity	.002
PR	-.573
SR	.010
Adjusted R^2	.211 ^a

Note. Entries are standardized β weights.

^a $p = .056$

Table 4-8
ANCOVA for Moderation of Collective Identity
on SRDS Delinquency and Status Recognition

Source	Type III SS	df	Mean Square	F
Corrected Model	1.570	4	.393	3.088 ^a
Intercept	38.890	1	38.890	305.975 ^a
Conflict Severity	.370	1	.370	2.908
HSR	.000	1	.000	.000
HCI	.231	1	.231	1.814
HSR*HCI	.529	1	.529	4.163 ^b
Error	2.288	18	.127	
Total	47.969	23		
Corrected Total	3.858	22		

^a $p < .05$

^b $p = .056$

Table 4-9
Means for SRDS Delinquency Scores

Collective Identity Level	Status Recognition	
	Low	High
Low	1.447	1.127
High	1.327	1.649

Table 4-10
ANCOVA for Moderation of Collective Identity on SRDS Drug and Status Recognition

Source	Type III SS	df	Mean Square	F
Corrected Model	.806	4	.202	1.888
Intercept	32.926	1	32.926	308.417 ^a
Conflict Severity	.015	1	.015	.140
HSR	.121	1	.121	1.133
HCI	.016	1	.016	.154
HSR*HCI	.685	1	.685	6.420 ^b
Error	1.922	19	.102	
Total	37.358	23		
Corrected Total	2.728	22		

^a $p = .000$

^b $p = .017$

Table 4-11
Means for SRDS Drug Scores

Collective Identity Level	Status Recognition	
	Low	High
Low	1.522	1.011
High	1.103	1.322

CHAPTER 5 STUDY TWO RESULTS

Demographics

Study Two included 2,602 adolescents between the ages of 10 and 16 years. This sample included students from California (15.8% of sample), Connecticut (25.6%), Florida (39.3%), New Jersey (2.2%), and Texas (17.1%). Sixth graders made up 35% of the sample, seventh graders 34.3%, and eighth graders 30.7%. Participants' mean age was 12.67 ($SD = .987$). One third of the participants were European American and nearly one third was Hispanic (Table 5-1). Sixty-two percent of the participants were female and 38% were male. Socioeconomic status was calculated using the Hollingshead Two Factor Index of Social Position (Hollingshead, 1957), based on the occupation and education level of either the father or mother. Many students could not provide the data necessary to calculate this measure. For those that did (approximately 50% of the sample), 15.6% were in the first two levels (corresponding to high social position), 33.3% were in the third level, and 51.1% were in the fourth and fifth levels (corresponding to low social position).

The relevant hypotheses were tested with the entire sample of Study Two, as well as with the subgroups created in Study Two based on the type of deviant behavior reported by the adolescent. Three subgroups were created: adolescents who reported no deviant behaviors (NO group, $N = 1936$), adolescents who reported engaging only in status offenses and/or nonviolent offenses (NVO group, $N = 278$), and adolescents who reported engaging in violent offenses (VO group, $N = 388$). Most adolescents in the VO

group also reported engaging in status and/or nonviolent offenses. A series of analyses of variances (ANOVAs) and Tukey's Honestly Significant Difference (HSD) follow-up tests were conducted to assess for relationships between the demographic variables and Self-Reported Delinquency Scale (SRDS) scores. All of the demographic variables were found to be significantly related to SRDS.

The first demographic variable assessed was the state in which the data was collected (Tables 5-2 and 5-3). Adolescents from Florida reported engaging in significantly less delinquent behavior than did adolescents from California. Adolescents from Connecticut reported engaging in significantly less deviant behavior than did adolescents from Florida, Texas, and California. The second demographic variable was grade in school, with eighth graders reporting significantly higher levels of delinquent behavior than sixth or seventh graders (Tables 5-4 and 5-5). Sixth and seventh graders did not significantly differ. The third demographic variable was age. The trend for these results was similar to those for grade in school, with older adolescents reporting higher levels of deviant behavior than did younger adolescents (Table 5-6 and 5-7). The fourth demographic variable was gender, with males reportedly engaging in significantly more delinquent behavior than females (Table 5-8 and 5-9).

The fifth demographic variable was grades in school. The trend for these scores was for adolescents who had higher grades to report lower levels of deviant behavior than did adolescents who reported lower grades (Tables 5-10 and 5-11). The sixth demographic variable was ethnicity (Table 5-12 and 5-13). There were some significant ethnic differences on rates of delinquent behavior, with adolescents who described their ethnicity as African American, Hispanic American, or Multiracial reporting significantly

higher levels of deviant behavior than those adolescents who described themselves as European American. Also, adolescents who self-described as Multiracial reported engaging in significantly higher levels of delinquent behavior than those adolescents who described themselves as Asian American.

The final demographic variable assessed was socioeconomic status, based on Hollingshead's Two Factor Social Position Index (Table 5-14 and 5-15). The only significant group differences were between adolescents ranked in the third position (middle class) and those ranked in the fifth position (lower class). Lower social position adolescents reported higher level of deviant behavior than did adolescents in the middle social position.

A series of regression analyses were conducted to determine which demographic variables continued to be significantly associated with SRDS when all of the demographic variables were entered into the model. In the first regression equation, SRDS was regressed on all of the demographic variables (state, grade, age, gender, grades in school, ethnicity, and family social position) simultaneously. Because the variables state and ethnicity were measured as categorical, nominal variables (i.e., the scores are not on a continuous distribution, nor do they have an underlying order), these variables had to be transformed before they could be included in the regression equation and effect coding was used.

Effect coding is often applied when none of the categories can be used as a control or comparison group (Cohen, 2001). None of the levels of the two categorical variables used in the present analyses (state and ethnicity) could be considered a control or base group against which the other levels of the variable could be compared. In effect coding,

instead of comparing the different levels to a control group, each level is compared to the grand mean (which corresponds to the mean of the entire sample for the variable of interest). The number of effect-coded variables always equals one fewer than the number of levels of the original variable to control for multicollinearity. To compute the effect codes for state, which had five levels, four new variables were created (in Study Two these were labeled SEC1-SEC4).

One of the levels is arbitrarily chosen as the base, and is given a code of -1 for each of the new effect-coded variables. This level does not have a corresponding variable to represent it; therefore in the present analyses the two levels either having the fewest number of participants (New Jersey) or being the least salient category (the "Other" ethnicity category) were selected. Each of the other levels is given scores of 1 or 0 on each of the codes. For example, in creating the effect-coded variables for state, New Jersey was selected as the base. Each adolescent from New Jersey was given a score of -1 on each of SEC1-SEC4. SEC1 represented Florida; therefore adolescents from Florida were given scores of 1 on SEC1 and adolescents from California, Texas, and Connecticut were given scores of 0 on SEC1.

This was repeated for the other three state effect-coded variables. Similar procedures were used to develop the six effect-coded variables representing the ethnic groups. During regression analyses, effect-coded variables are entered together as a block to represent the categorical variables. In the results of the regression analysis, the slope for a specific effect-coded variable corresponds to the difference between the mean of that level of the category and the grand mean on the variable of interest. For example, a significant, positive value for the effect-coded variable representing California in a

regression predicting SRDS, would indicate that adolescents from California reported significantly higher SRDS scores (as compared to the entire sample of adolescents in Study Two).

For Study Two, the initial regression analysis included age, the six effect-coded variables for ethnicity, gender, grade, grades in school, the Hollingshead social position score, and the four effect-coded variables for state entered simultaneously. This analysis showed the demographic variables accounted for 14% of the variance in SRDS (Table 5-16). State (specifically the effect-coded variables representing California and Connecticut), age, gender, grades in school, grade, and ethnicity (specifically the effect-coded variables representing the Hispanic American and Multiracial categories) each accounted for unique variance in SRDS. A second simultaneous entry regression analysis was conducted which included these significant demographic variables as predictors. The six demographic variables accounted for 14.5% of the variance in SRDS and all continued to account for unique variance in SRDS scores (Table 5-16).

A hierarchical regression analysis was then conducted with each of the six demographic variables entered individually in six steps (the two sets of effect-coded variables were entered together in two of those six steps). The order of entry was determined by the standardized beta weights in the previous regression. The variable with largest beta weight was entered first and the order of the variables was as follows: grades in school, age, gender, the effect-coded variables representing state, grade, and the effect-coded variables representing ethnicity. In this analysis each variable continued to account for unique variance in SRDS (Table 5-17). Overall, the regression analyses showed grades in school, age, gender, state, grade, and ethnicity were significantly

related to SRDS (even when controlling for the other demographic variables). These demographic variables were therefore controlled for in the following regression analyses.

Anger Arousal, Deviant Behavior, and Global Procedural Fairness

Hypothesis 2, focusing on the relationship between global procedural fairness and affective and behavioral indicators, was tested both with the entire sample and within the specific subgroups created for Study Two. For this hypothesis, a composite measure of global procedural fairness (GPF) was used. This scale was calculated as a mean of all sixteen procedural justice items. The shortened form of the SRDS, including the 33 delinquent behavior items, and a proxy measure of anger arousal, the Massachusetts Youth Screening Instrument-Second Version (MAYSI-2) Angry-Irritable Scale, also were used. This measure is different from the anger arousal measure completed by adolescents in Study One, in that it does not reflect the adolescent's perception of his or her angry feelings in response to treatment received during the course of resolving the family conflict. Rather, it is a reflection of the adolescent's perception of his or her angry or irritable mood over the past few months.

It was predicted that this measure of affective response would still be significantly associated with perceived procedural unfairness. However, the strength of this relationship was hypothesized to possibly be less than that observed in previous studies using the conflict-specific measure of anger arousal for two reasons: (1) there is no temporal relationship between the procedural fairness dimensions and this measure of anger arousal; (2) The MAYSI-2 is a more general measure of anger and irritability. For Study Two, the first analysis was a hierarchical regression to predict feelings of anger and irritability (AA) for the entire sample.

In the first step of this hierarchical regression, the six demographic variables were entered, followed by the composite GPF variable in the second step. This regression was significant, $F(15, 2194) = 19.609, p = .000$, with GPF and the demographic variables accounting for 11.2% of the variance in anger arousal. Grades in school, gender, the effect-coded variables representing the categories Asian American and Multiracial, and GPF all accounted for unique variance in AA. GPF accounted for the largest amount of variance (Table 5-18). These results showed that even after controlling for the relationships between the demographic variables and anger arousal, perceptions of overall unfairness were related to feelings of anger and irritability for the entire sample.

This analysis was replicated across the three subgroups determined by offense severity. For the NO group, the demographic variables and GPF accounted for 8.9% of the variance in AA. Grades in school, the African American, Asian American, and Multiracial categories, and gender accounted for unique variance in AA. GPF also accounted for unique variance in, and had the strongest relationship with, AA (Table 5-18). For the NVO group, the demographic variables in the first step of the hierarchical regression were not associated with AA. The second step in the hierarchical regression was significant, with GPF and gender accounting for unique variance in AA (Table 5-18). GPF accounted for the largest amount of unique variance in AA.

The results of the analyses for the VO group were somewhat similar to those found for the entire sample and the NO group. The hierarchical regression for this group revealed the demographic variables and GPF combined accounted for 14.9% of the variance in AA. Gender, grade, and the variables representing California and Connecticut accounted for unique variance in AA, as did GPF (Table 5-18). These results showed that

for adolescents across the three offense-type groups, even after controlling for relationships between the demographic variables and anger arousal, perceptions of overall unfairness were associated with higher levels of general anger and irritability.

A second series of regression analyses was conducted to assess the relationships between delinquent behavior and global procedural fairness (controlling for the demographic variables) across the entire sample and the three subgroups. Separate hierarchical regression analyses were conducted for each of the groups, in which SRDS was regressed on the demographic variables in the first step and GPF in the second step. For the entire sample, the hierarchical regression was significant, $F(15, 2194) = 39.452$, $p = .000$. Grades in school, age, gender, grade, the variables representing the Hispanic American and Multiracial categories, and the variables representing California and Connecticut, as well as GPF, accounted for 20.7% of the variance in deviant behavior. GPF accounted for the largest amount of unique variance (Table 5-19).

For the NO group, the demographic variables and GPF were significantly associated with deviant behavior and accounted for 11.2% of the variance. Grades in school, gender, age, the variable representing the African American category, and GPF each accounted for unique variance in SRDS (Table 5-19). GPF accounted for the largest amount of unique variance in deviant behavior. These results showed that, for the entire sample and the adolescents who reported never engaging in deviant behavior, the demographic variables were related to levels of deviant behavior. However, even after taking these relationships into account, overall perceptions of unfairness continued to be associated with higher levels of deviant behavior.

For the NVO group, the hierarchical regression analysis was significant, with the variable representing the European American category and the variable representing California accounting for unique variance in the first step. In the second step of the regression, only the variable representing California accounted for unique variance in SRDS, but the beta weight for GPF approached significance ($p = .056$) (Table 5-19). These results showed that in Study Two, for those adolescents who reported engaging in nonviolent and status offenses, perceptions of overall unfairness were not associated with deviant behavior, after controlling for the relationships among the demographic variables and deviant behavior.

The results for the VO group were somewhat similar to the results for the NVO group. The first step of the hierarchical regression was significant. The effect-coded variables representing the African American and Hispanic American categories, age, gender, and the variables representing California and Texas accounted for unique variance. These variables remained significant in the second step of the regression, but GPF was not a significant predictor in this step. Although, once again, the beta weight approached significance ($p = .056$) (Table 5-19). These results showed that for those adolescents who reported engaging in violent offenses in Study Two (when demographic variables were included in the regression analyses), levels of deviant behavior were no longer associated with overall perceptions of procedural injustice.

Personal Respect and Status Recognition

Hypothesis 3 focused on the relationships among personal respect (PR) and status recognition (SR), GPF, and AA. For the following analyses, PR was measured with the three-item personal respect subscale of the Family Decision Making Questionnaire-Youth Form (FDMQ-Y) which included the following items: "Your parents showed a lot of

kindness and understanding,” “Your parents treated you with respect,” and “Your parents cared about you as an individual.” SR also was measured as a three-item scale from the FDMQ-Y, of these three items: “Your parents probably gave you less respect than they would have given to other family members,” “You were treated as a valued member of your family,” and “Your parents treated you as if you were somebody really important.” In these analyses GPF was measured with a single item of overall procedural fairness, “Overall, your parent(s) treated you fairly.” This measure was used because the composite measure used in previous analyses included aspects of personal respect and status recognition and may have confounded the analyses. AA was again measured using the Angry/Irritable subscale from the MAYSI-2.

The first part of Hypothesis 3 predicted both PR and SR would be associated with GPF. It also posited PR would have a stronger relationship with GPF than would SR. This was tested using a series of regression analyses for the entire sample and the subgroups. For the entire sample, a two-step hierarchical regression was conducted with the demographic variables entered on the first step of the regression. PR and SR were then entered on the second step of the regression. This step was significant, $F(16, 2193) = 184.767, p = .000$, and the demographic variables, PR, and SR accounted for 57.1% of the variance in GPF. PR, SR, and the variable representing Texas accounted for unique variance in GPF. PR accounted for the largest amount of unique variance (Table 5-20).

Next, a three-step hierarchical multiple regression analysis was conducted with the demographic variables entered on the first step, PR entered into the equation on the second step, and SR entered on the third step. This analysis also was significant and PR

and SR both accounted for unique variance in GPF. The final step in this series of analyses was a second three-step hierarchical multiple regression analysis with SR entered on the second step and PR entered on the third step. This analysis was significant and revealed the same results. In both three-step hierarchical regressions, PR accounted for a larger amount of unique variance in GPF than did SR. These results showed that both feeling disrespected as an individual and as a family member were related to perceptions of overall unfairness in the process of resolving family conflict (even after controlling for the effects of the state). Feeling disrespected as an individual was more closely related to perceived overall unfairness than was feeling disrespected as a family member.

These analyses were replicated across the three offense status subgroups. For the NO group, the two-step hierarchical regression was significant, with the variable representing the European American category, the variable representing Texas, PR, and SR accounting for unique variance in GPF (Table 5-20). In the 2 three-step hierarchical regression analyses (with PR and SR entered separately on the second and third steps of the regressions), both continued to account for unique variance in GPF. In all three of these analyses, PR accounted for the largest amount of unique variance. These results showed that for those adolescents who reported never engaging in deviant behavior, both feeling respected as an individual and as a family member were associated with perceptions of fairness overall. Perceptions of being respected as an individual were more closely associated with overall justice appraisals than were perceptions of status within the family. These results remained significant, even after controlling for the relationships among the state the adolescent was from, ethnicity, and overall perceptions of fairness.

The two-step hierarchical regression for the NVO group also was significant. PR and SR accounted for unique variance in GPF, while the demographic variables did not (Table 5-20). PR and SR continued to account for unique variance in GPF in both of the three-step hierarchical regression analyses. SR accounted for the largest amount of unique variance in all three regression analyses. The results showed that perceptions of being respected as an individual and as a family member were significantly related to perceptions of overall fairness for adolescents who reported engaging in nonviolent and status offenses. For this group, in contrast to the results for the entire sample and for the adolescents who reported never engaging in deviant behavior, perceived status within the family was more closely associated with overall perceptions of fairness than was feeling respected as an individual.

For the VO group, the first step in the two-step hierarchical regression, which included the demographic variables, was not significant. The second step, including PR and SR, was significant. PR and SR only accounted for unique variance in this second step (Table 5-20). PR and SR each continued to account for unique variance in the 2 three-step hierarchical regression analyses. In all three analyses, PR accounted for a larger amount of unique variance in GPF. The results showed that for those adolescents who reported engaging in violent offenses, the demographic variables were not associated with perceptions of overall fairness. Both perceptions of being respected as an individual and as a family member were associated with global justice appraisals; however, similar to the results for the entire sample and for those adolescents who reported never engaging in deviant offenses, perceptions of being respected as an individual were more closely associated with overall perceptions of fairness.

The second part of Hypothesis 3 predicted adolescents who perceived their parents did not respect them as individuals (low PR) or as family members (low SR), would experience higher levels of anger arousal even, after controlling for the demographic variables. A series of hierarchical regression analyses (the same as those used to predict GPF) were conducted to test this hypothesis for the entire sample and each of the subgroups. For the entire sample, the second step of the two-step hierarchical regression was significant, $F(16, 2193) = 21.335, p = .000$, with the demographic variables, PR, and SR combined accounting for 12.8% of the variance in AA (Table 5-21). Grades in school, the variables representing the Asian American and Multiracial categories, gender, PR, and SR accounted for unique variance in AA.

In both three-step hierarchical regression analyses, those same demographic variables, PR, and SR accounted for unique variance. In all three hierarchical regression analyses, SR accounted for the largest amount of unique variance in AA. These results indicated that even after controlling for the effects of the demographic variables, both PR and SR had significant inverse relationships with AA, independent of the effect of the other variable. In other words, adolescents who perceived their parents disrespected them as individuals and those who perceived their parents disrespected them as family members experienced anger and irritability. Perceptions of being disrespected as a family member were more closely associated with overall feeling of unfairness.

These analyses were replicated across the subgroups based on offense type, with somewhat varied results. For the NO group, the two-step hierarchical regression analysis was significant, $F(16, 1629) = 12.879, p = .000$ (Table 5-21), with the demographic variables, PR, and SR combined accounting for 10.4% of the variance in anger arousal;

however, PR did not account for unique variance in AA. SR, grades in school, the variables representing the Asian American, African American, and Multiracial categories, and gender did account for unique variance in AA.

Next, a three-step hierarchical multiple regression in which PR was entered into the equation on the second step, followed by SR on the third step, was conducted. This analysis also was significant. PR accounted for unique variance in second step; however, after SR was entered into the model in the third step, PR no longer accounted for unique variance. These results showed that both PR and SR were significantly related to AA in the NO group, even after controlling for the demographic variables; however, PR did not account for unique variance above and beyond that accounted for by SR. For adolescents who reported never engaging in delinquent offenses, feeling disrespected as a family member was more strongly associated with feelings of anger and irritability than was feeling disrespected as a person (even after controlling for the relationships among the demographic variables and angry/irritable feelings).

For the NVO group, opposite results were revealed. In the first regression analysis, the demographic variables were again entered on the first step, followed by PR and SR on the second step. The first step of this analysis was not significant, but the second step was, $F(16, 224) = 1.926, p = .019$ (Table 5-21). The demographic variables, PR, and SR accounted for 5.8% of the variance in AA; however, only gender and PR accounted for unique variance in AA.

The three-step hierarchical multiple regression (with the demographic variables entered on the first step, SR on the second step, and PR on the third step) was significant overall; however, once again the first step was not significant. The second step was just

barely nonsignificant ($p = .051$), however, SR did account for unique variance in AA. In the third step, gender and PR accounted for unique variance, while SR did not. These results showed that both PR and SR had significant negative relationships with AA for the NVO group, even after controlling for the demographic variables; however, SR did not have a relationship with AA after the relationship between PR and AA was controlled for. In other words, for adolescents who reported engaging in status offenses and other nonviolent offenses, perceptions of being disrespected as a person were more closely associated with anger and irritability than were perceptions of being disrespected as a family member, even after controlling for the relationship between gender and anger/irritability.

In the analyses for the VO group, the two-step hierarchical regression was significant, $F(16, 306) = 4.679, p = .000$; however, neither PR, nor SR, accounted for unique variance in AA. Gender and the variables representing California and Connecticut did account for unique variance in AA (Table 5-21). A three-step hierarchical multiple regression, with PR entered on the second step and SR entered on the third, was then conducted. All three steps were significant. PR accounted for unique variance in the second step; however, neither PR, nor SR, accounted for unique variance in the third step. Similar results were shown in the second three-step hierarchical regression. These results appeared to suggest that for the VO group, neither PR, nor SR, accounted for unique variance above and beyond that accounted for by the other variables. It seems that when the demographic variables are taken into consideration, the effects of perceptions of being respected as an individual and perceptions of being respected as a family member

may cancel each other out in relation to feeling of general anger and irritability (for those adolescents who report engaging in violent offenses).

The third part of Hypothesis 3 focused on the possible mediating effects of PR and SR on the relationship between GFP and AA. This was tested in two ways: first, by using the regression method for testing mediating effects reported by Baron and Kenny (1986); and second, by using Structural Equation Modeling (SEM). In these analyses, the one-item scale of GPF, the three-item scale of PR, and the three-item scale of SR were used. The MAYSI-2 Angry/Irritable scale was again used to measure anger arousal.

Baron and Kenny (1986) described a method using regression analyses to test for mediation. A series of regressions were conducted to separately assess for PR and SR as mediators for the entire sample, as well as for the three subgroups. In these analyses, each of the three regression equations used in the Baron and Kenny method were conducted as hierarchical regressions, with the demographic variables entered on the first step of the analysis to control for the effects of these variables.

The first series focused on PR. In the first hierarchical regression equation, the demographic variables were entered on the first step, with the mediator (PR) regressed on the independent variable (GPF) in the second step. For the entire sample, the results of this regression were significant $F(15, 2194) = 168.982, p = .000$. In the second regression equation, the demographic variables were again entered on the first step and the dependent variable (AA) was regressed on the independent variable (GPF) in the second step. This also was significant, $F(15, 2194) = 18.039, p = .000$. In the third regression equation, the demographic variables were entered on the first step and the dependent

variable (AA) was regressed on both the mediator (PR) and the independent variable (GPF) in the second step. The resulting equation was significant, $F(16, 2193) = 19.050$, $p = .000$ (Table 5-22).

Baron and Kenny (1986) reported that a mediation effect is present if three criteria are met. First, all three regression equations must be significant. Second, the mediator must have an effect on the dependent variable in the third equation. Third, the effect of independent variable on the dependent variable must be less in the third equation than in the second equation. These criteria were met in these analyses. All three regression equations were significant and the standardized beta weight of GPF in the third equation (-.125) was smaller than that of the second equation (-.240). PR also accounted for unique variance in AA in the third equation. The results of the three regression equations showed both GPF and PR were related to AA for the entire sample. The results also showed that PR partially mediated the relationship between GPF and AA. In other words, adolescents who reported their parents treated them unfairly, during the process of resolving family conflict, reported feelings of anger and irritability. These adolescents also reported feeling disrespected as individuals, and these feelings partially accounted for the relationship between perceptions of unfairness and angry and irritable feelings, even after controlling for the effects of the demographic variables.

These analyses were replicated to assess whether SR also mediated the relationship between GPF and AA for the entire sample. Again all three regression equations were significant (Table 5-23) and the other Baron and Kenny (1986) criteria were met. These results showed a mediator effect of SR on the relationship between GPF and AA. The results showed that, similar to the results for the analyses with PR, adolescents in the

entire sample who perceived their parents treated them unfairly and felt disrespected as family members reported feelings of anger and irritability. Perceptions of being disrespected as family members partially accounted for the relationship between perceptions of unfairness overall and feelings of general anger or irritability. These results were significant, even after controlling for the relationships among the demographic variables and general feelings of anger and irritability.

The analyses of the mediation by PR and SR were tested across the three groups based on offense type. For the NO group, the first series of regression analyses focused on the mediating effects of PR on the relationship between GPF and AA. All three regression equations were significant (Table 5-22) and the other Baron and Kenny criteria were met. These results showed that similar to the results of the analyses with the entire sample, PR partially mediated the relationship between GPF and AA. For adolescents who reported never engaging in deviant behavior, even when demographic variables were controlled for, feeling disrespected as a person partially accounted for the relationship between overall feelings of unfairness and feelings of anger and irritability.

The analyses for the mediation of SR on GPF and AA also were significant for the NO group. Again, all of the Baron and Kenny (1986) criteria were met (Table 5-23). These results showed that for adolescents who reported never engaging in delinquent and criminal behavior, perceptions of being disrespected as a family member partially accounted for the relationship between perceived unfairness of family conflict resolution procedures and feelings of anger and irritability. These results were shown even after controlling for the relationships among these variables with the demographic variables.

For the NVO group, PR completely mediated the relationship between GPF and AA. In these analyses, again the three regressions were significant (Table 5-22), and PR accounted for unique variance in AA in the third regression equation. Also, in that third equation, GPF did not account for unique variance in AA, indicating that PR had completely mediated the relationship between GPF and AA. For adolescents who reported only engaging in nonviolent and status offenses, feelings of anger and irritability were due entirely to feeling disrespected as a person. These feelings completely accounted for the relationship between perceptions that the conflict-resolution process overall was unfair and angry/irritable feelings. These results were robust even when the demographic variables were included in the analyses.

The regression analyses for the mediation of SR on GPF and AA were not significant for the NVO group (Table 5-23). All three regression equations were significant, but neither SR nor GPF accounted for unique variance in AA in the third equation. These results showed that, even when the demographic variables were controlled for, feeling disrespected as a family member and perceived procedural unfairness were related to angry and irritable feelings for adolescents who reported engaging in nonviolent and status offenses. Feeling disrespected as a family member did not, however, mediate the relationship between global procedural unfairness and anger and irritability in Study Two.

For the VO group, the analyses of the mediational effect of PR were not significant (Table 5-22). The three regression equations were significant, however neither GPF nor PR accounted for unique variance in AA in the third equation. In this third regression, gender, the variables representing California and Connecticut, and grade did account for

unique variance in AA. These results showed that in Study Two, when the demographic variables were controlled for, perceptions of overall unfairness and disrespect at the individual level were associated with feelings of anger and irritability for those adolescents who reported engaging in violent offenses. The perception of being disrespected as a person, did not, however, account for the relationship between perceived unfairness and angry or irritable feelings.

The analyses of the mediational effect of SR on GPF and AA for the VO group also were not significant. All three hierarchical regression analyses were significant; however, in the third equation, neither GPF, nor SR accounted for unique variance in AA. The beta weight for SR did approach significance ($p = .069$). In this third equation, gender, the variables representing California and Connecticut, and grade did account for unique variance in AA (Table 5-23). These findings showed that in Study Two, when the demographic variables were controlled for, perceptions of unfairness overall and being disrespected as a family member were associated with general angry and irritable feelings for those adolescents who reported engaging in violent offenses. The perception of being disrespected as a family member, did not, however, account for the relationship between perceived unfairness and anger or irritability.

The mediation model also was tested using Structural Equation Modeling (SEM) techniques. The initial two models tested, as described in Chapter 3, were the Partial Mediation Model and the Full Mediation Model. Both were initially tested with the entire sample. The Partial Mediation Model resulted in an overall fit of $\chi^2(1, N = 2602) = 953.765, p = .000, GFI = .867, CFI = .806, TLI = -.163, SRMR = .132, RMSEA = .605$. All values of the fit indices suggested this model is a poor fit to the data.

Fitting the Full Mediation Model to the entire sample (with the path from GPF to AA constrained to zero) resulted in an overall model fit of $\chi^2(2, N = 2602) = 961.846$, $p = 0.000$, $\chi^2/df = 480.923$, GFI = .865, CFI = .805, TLI = .414, SRMR = .143, RMSEA = .430. These indices suggested poor fit of the data to Full Mediation Model as well. A review of the modification indices suggested a covariance between the error terms associated with PR and SR would substantially improve the model. This covariance would suggest that PR and SR were affected by some other construct not included in the model. There is theoretical support for including this covariance in the model. PR and SR are related concepts. Also, the working theory on which the present study is based suggests that Identity Orientation may be the construct that affects both PR and SR that is not included in this model. Unfortunately identity orientation was not measured in Study Two and cannot be included in the model; however, the covariance between the error terms associated with PR and SR could be and was included in the model.

The Partial Mediation and Full Mediation models were refitted to the data with the covariance added. The Partial Mediation Model with Covariance resulted in an overall fit of $\chi^2(0, N = 2602) = .000$, GFI = 1.000, CFI = 1.000, SRMR = .000. This model was a just identified model, meaning all possible parameters were specified in the model. For just identified models, the Chi-square statistic and df are zero. A p value cannot be calculated for just-identified models. All indices indicated good fit of the data to the model, but this is always the result with a just identified model.

The Full Mediation Model with Covariance (Figure 5-1) resulted in an overall fit of $\chi^2(1, N = 2602) = 8.081$, $p = 0.004$, $\chi^2/df = 8.081$, GFI = .998, CFI = .999, TLI = .991, SRMR = .039, RMSEA = .052. With the exception of the Chi-square and Chi-square/ df

indices, these results suggest the model fit the data well. The Chi-square Difference test suggested the Partial Mediation Model with Covariance provided a better fit to the data, χ^2 difference ($df = 1 - 0 = 1$) = 8.081 - .000 = 8.081, $p = .004$. The Partial Mediation with Covariance Model accounted for 53% of the variance in PR, 49% of the variance in SR, and 11% of the variance in AA. For the entire sample, the fit indices for the models are summarized in Table 5-24 and the standardized path estimates for the Partial Mediation with Covariance Model are in Table 5-25.

For the entire sample, the paths from PR to GPF, SR to GPF, and GPF to AA were significant. The path from SR to AA also was significant, however, the path from PR to AA was not. These results indicated that when PR and SR were entered as mediators simultaneously in the model, only SR partially mediated the relationship between GPF and AA for the entire sample. This was a somewhat different test than that conducted with the Baron and Kenny (1986) method, which tested the mediation effects of PR and SR separately. These results showed that for the entire sample, adolescents' perceptions of being disrespected as individuals and as family members were associated with overall perceptions of unfairness. Perceptions of unfairness also were associated with angry and irritable feelings. The perceived disrespect at the family level partially accounted for the relationship between perceptions of overall unfairness and angry and irritable feelings.

The four models were then fit to the three subgroups based on offense type. A summary of the model fit indices and path estimates for the four groups are provided in Tables 5-26 and 5-27. These indicated that the Partial Mediation Model with Covariance fit the data for the NO group well; however, the Full Mediation Model with Covariance provided the best fit for the NVO and VO groups.

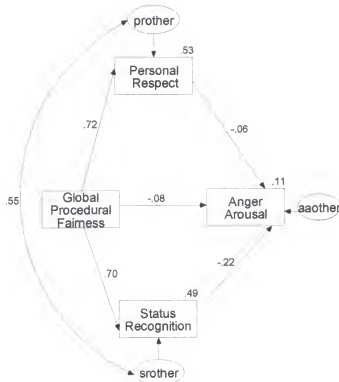


Figure 5-1. Revised Model 3, Partial Mediation Model with Covariance of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal for the Entire Sample; Standardized Path Coefficients Appear on Single-Headed Arrows; Squared Multiple Correlations of Endogenous Variables Appear at the Upper Right Corner of the Variable.

For the NO group, in the Partial Mediation with Covariance Model, the paths from PR to GPF, SR to GPF, and GPF to AA were significant. The path from SR to AA also was significant; however, the path from PR to AA was not significant. These results showed that, for adolescents who reported never engaging in deviant behavior, similar to the finding for the entire sample, feeling disrespected as a family member partially accounted for the relationship between overall unfairness and anger and irritability. This result differed from that found with the Baron and Kenny (1986) method, which found both PR and SR significantly mediated this relationship when tested individually as mediators.

For the NVO group, the Full Mediation Model with Covariance provided the best fit. In this model, the paths from PR to GPF and SR to GPF were significant. The path from PR to AA also was significant, however, the path from SR to AA was not significant. These results showed that, for adolescents who reported engaging in nonviolent and status offenses, the perception that their parents disrespected them as individuals accounted for the relationship between perceptions of overall unfairness in the process of resolving the family conflict and feelings of anger and irritability. The SEM analyses replicated the results found using the Baron and Kenny (1986) method to test the mediational models for the NVO group.

For the VO group, the Full Mediation Model with Covariance provided the best fit. In this model, the paths from PR to GPF and SR to GPF were significant. Also, the path from SR to AA was significant, while the path from PR to AA was not. These results showed that for adolescents who reported engaging in violent offenses, perceptions of being disrespected as family members completely accounted for the relationship between perceptions of overall unfairness and angry and irritable feelings.

An alternative set of mediation models also was tested to assess the relationships among PR, SR, GPF, and AA. In this set of models, GPF was tested as a mediator in the relationships between PR and AA and SR and AA. Once again four versions of the model were tested: a Partial Mediation Model without Covariance, a Full Mediation Model without Covariance, a Partial Mediation Model with Covariance, and a Full Mediation Model with Covariance. In these models, PR and SR were the exogenous variables (i.e., those variables having no causes within the model) and the covariance was between the variables themselves, rather than the covariance between error terms as depicted in the

hypothesized models. These models also were tested using SEM techniques and were initially tested with the entire sample.

The Partial Mediation Model without Covariance resulted in an overall fit of $\chi^2(1, N = 2602) = 2428.478, p = .000, \chi^2/df = 2428.478, GFI = .767, CFI = .506, TLI = -.962, SRMR = .491, RMSEA = .966$. All values of the fit indices suggested this model is a poor fit to the data. Fitting the Full Mediation Model without Covariance to the entire sample resulted in an overall model fit of $\chi^2(3, N = 2602) = 2523.228, p = 0.000, \chi^2/df = 841.076, GFI = .755, CFI = .487, TLI = -.025, SRMR = .503, RMSEA = .568$. These indices also suggested poor fit of the data to this second model as well.

The Partial Mediation Model with Covariance resulted in an overall fit of $\chi^2(0, N = 2602) = .000, GFI = 1.000, CFI = 1.000, \text{ and } SRMR = .000$. This is a just-identified model and does not provide a good test of the fit of the data to the model. The Full Mediation Model with Covariance resulted in an overall fit of $\chi^2(2, N = 2602) = 94.750, p = 0.000, \chi^2/df = 47.375, GFI = .982, CFI = .981, TLI = .943, SRMR = .144, RMSEA = .134$. The GFI, CFI, and TLI values suggest this model fit the data well, although the other fit index values showed less than adequate fit.

The Chi-square Difference tests were used to compare the four models. The comparison of the Partial Mediation Model with Covariance was compared with the Partial Mediation Model without Covariance was $\chi^2 \text{ difference}(df = 2 - 1 = 1) = 2428.478 - 0 = 2428.478, p = 0.000$; with the Full Mediation Model without Covariance was $\chi^2 \text{ difference}(df = 3 - 0 = 3) = 2523.228 - 0 = 2523.228, p = 0.000$; and with the Full Mediation Model with Covariance was $\chi^2 \text{ difference}(df = 2 - 0 = 2) = 94.750 - 0 =$

94.750, $p = 0.000$. The fit indices and the Chi-square Difference tests showed that the Partial Mediation Model with Covariance provides the best fit of the data (Figure 5-2).

The Partial Mediation with Covariance Model, in which GPF mediated the relationships between PR and AA and SR and AA, accounted for 57% of the variance in GPF and 11% of the variance in AA. For the entire sample, fit indices for the models are summarized in Table 5-28 and the standardized path estimates for the Partial Mediation with Covariance Model are in Table 5-29.

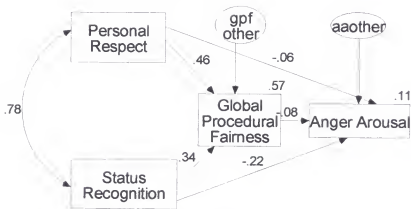


Figure5-2. Model 7, Partial Mediation Model with Covariance of Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal for the Entire Sample; Standardized Path Coefficients Appear on Single-Headed Arrows; Squared Multiple Correlations of Endogenous Variables Appear at the Upper Right Corner of the Variable.

For the entire sample, both paths, from PR to GPF and SR to GPF, were significant. Also paths from GPF to AA and SR to AA, were significant. However, the path from PR to AA was not significant. These results showed that PR and SR were both associated with GPF, and GPF was associated with AA. The results also suggested that GPF partially accounted for the relationship between SR and AA, and completely mediated the relationship between PR and AA.

These results showed that for the entire sample, adolescents' perceptions of being disrespected as individuals and as family members were associated with overall feelings

of unfairness. The perceived unfairness completely accounted for the relationship between perceptions of disrespect as a person and angry and irritable feelings. The perceived unfairness also partially accounted for the relationship between perceptions of disrespect as a family member and angry and irritable feelings.

The four alternative models were then fit to the three subgroups based on offense type. Summaries of the model fit indices and the path estimates for the four groups are provided in Tables 5-30 and 5-31. These indicated that the Partial Mediation Model with Covariance fit the data for the NO and NVO groups best; however, the Full Mediation Model with Covariance provided the best fit for the VO group. For the NO group (in the Partial Mediation Model) the paths from PR and SR to GPF were significant, and the path from GPF to AA was significant. The path from SR to AA, also was significant; however, the path from PR to AA was not. These results showed that for adolescents who reported never engaging in deviant behavior, the results were similar to those for the entire sample. It appears perceptions of overall fairness partially mediated the relationship between feeling disrespected as a family member and general anger/irritability. Perceptions of unfairness overall also completely mediated the relationship between feeling disrespected as an individual and angry and irritable feelings.

For the NVO group, in the Partial Mediation Model with Covariance, a different pattern of results was revealed. The paths between PR and GPF and SR and GPF were significant. The paths between GPF and AA and SR and AA were not significant; however, the path between PR and AA was significant. These results suggested that feeling disrespected as a person and as a family member were associated with overall

perceptions of unfairness. However, only perceptions of being disrespected as an individual were associated with general feelings of anger or irritability.

For the VO group, the Full Mediation Model with Covariance provided the best fit of the data. All three paths were significant. These results showed that perceptions of being respected as a person and as a family member were associated with perceptions of unfairness overall. Perceptions of unfairness were associated with general angry and irritable feelings, and appeared to completely account for relationships among feeling disrespected both at the individual and family level and feeling angry or irritable.

The AIC, Akaike Information Criterion (Akaike, 1987), takes complexity of the model into account and allows comparison of non-hierarchical models. Lower values indicate better fit. The AIC values of the various models were used to determine if the hypothesized model (PR and SR as mediators) fit the data for various groups better than did the alternative model (GPF as mediator). For the entire sample and the NO group, the AIC values for the two Partial Mediation Models with Covariance were compared. For both groups, these values were the same, indicating both models fit the data equally well. For the NVO group, the AIC value for the hypothesized Partial Mediation Model with Covariance was compared with the AIC value for the alternative Full Mediation Model with Covariance. These values indicated the hypothesized model fit the data better for the NVO group. For the VO group, the AIC values for the two Full Mediation Models with Covariance were compared. These values also indicated the hypothesized model for the VO group fit the data better.

Voice, Global Procedural Fairness, and Deviant Behavior

Hypothesis 5 explored the relationships among global procedural fairness, voice, and deviant behavior for the entire sample and the subgroups. These analyses used the

single item measure of GPF and the shortened delinquency scale from the SRDS. The three-item Voice subscale of the FDMQ-Y also was used in these analyses and included the following items: “You had an opportunity to tell your side of the story,” “Your parent(s) listened to you,” and “Your parent(s) did not pay attention to what you had to say” (reverse scored). The first part of Hypothesis 5 predicted a relationship between Voice and SRDS. The second part of Hypothesis 5 assessed for a Voice mediation effect on the relationship between GPF and SRDS.

To test the first part of Hypothesis 5, SRDS was regressed on Voice and the demographic variables in a two-step hierarchical regression. For the entire sample, the regression analysis was significant, $F(15, 2194) = 40.216, p = .000$, and these variables accounted for 21% of the variance in delinquent behavior (Table 5-32). Grades in school, the variables representing the Hispanic American and Multiracial categories, age, gender, the categories representing California and Connecticut, grade, and Voice accounted for unique variance in SRDS. Voice accounted for the largest amount of unique variance. These results showed that even after controlling for the demographic variables, having input in the process of resolving family conflict was related to lower levels of deviant behavior.

To test the mediation effect of Voice on the relationship between GPF and SRDS, Baron and Kenny’s (1986) regression analysis method was again used. Again, these analyses were conducted as hierarchical regressions with the demographic variables entered on the first step. In the first regression equation, Voice was regressed on GPF in the second step. This analysis was significant, $F(15, 2194) = 105.148, p = .000$. In the

second regression equation, SRDS was regressed on GPF in the second step of the hierarchical regression. This analysis also was significant, $F(15, 2194) = 37.833$, $p = .000$. In the third regression equation, SRDS was regressed on both Voice and GPF in the second step of the hierarchical regression. This equation also was significant, $F(16, 2193) = 39.815$, $p = .000$. Both of the other criteria to test for mediation also were met. Voice accounted for unique variance in SRDS and GPF accounted for less variance in the third equation than it did in the second equation (Table 5-33). These results showed that having input into the process of resolving family conflict partially accounted for the relationship between perceived fairness and lower levels of deviant behavior, even after controlling for the demographic variables.

For the NO group, the relationship between having voice and deviant behavior also was assessed. The two-step hierarchical regression (with the demographic variables entered on the first step and Voice entered on the second step) was significant, $F(15, 1630) = 14.566$, $p = .000$ (Table 5-32). In the second step of the regression, grades in school, the variable representing the African American category, age, gender, and Voice accounted for unique variance in SRDS. Voice accounted for the largest amount of unique variance.

The mediation analysis also was significant for the NO group (Table 5-33). All of the criteria set forth by Baron and Kenny (1986) were met. These results showed that for adolescents who reported never engaging in deviant behavior, having input in the process of resolving family conflict partially accounted for the relationship between their low levels of deviant behavior and perceptions of procedural fairness. These results were robust even when the demographic variables were included in the analyses.

The analyses for the NVO group revealed that there was a relationship between Voice and SRDS, $F(15, 225) = 2.266, p = .005$ (Table 5-32). In the second step of the hierarchical regression, the variables representing the European American and Hispanic American categories, the variable representing California, and Voice accounted for unique variance in SRDS. The variable representing California and Voice accounted for similar amounts of unique variance and higher amounts than the other variables.

The mediational analyses for the NVO group, however, were not significant. All three hierarchical regressions were significant, but neither Voice, nor GPF, accounted for unique variance in the third equation (Table 5-33). In this third equation, the variable representing the Hispanic American category and the variable representing California did account for unique variance in SRDS. These results indicated that in Study Two, for adolescents who reported engaging in nonviolent and status offenses, having input in the process of resolving family conflict was associated with lower levels of self-reported deviant behavior. However, the opportunity to provide input did not account for the relationship between levels of deviant behavior and perceived overall fairness.

For the VO group, Voice again was significantly negatively associated with SRDS, $F(15, 307) = 4.132, p = .000$ (Table 5-32). In the second step of the hierarchical regression, the variables representing the African American and Hispanic American categories, age, gender, the variables representing Texas and California, and Voice accounted for unique variance in SRDS. The mediation analyses also were significant and for this group; Voice completely mediated the relationship between GPF and SRDS (Table 5-33). All three regression equations were significant. Voice accounted for unique variance in the third equation, while GPF did not. These results showed that for those

adolescents who reported engaging in violent offenses, not having input in the process of resolving family conflict completely accounted for the relationship between deviant behavior and perceived procedural unfairness, even when the relationships between deviant behavior and the various demographic variables were controlled for.

The mediation model in Hypothesis Five also was tested using SEM. The two models tested, as described in Chapter 3, were the Partial Mediation Model and the Full Mediation Model. Both were initially tested with the entire sample. The Partial Mediation Model (as seen in Figure 5-3) resulted in an overall fit of $\chi^2(0, N = 2602) = .000$, GFI = 1.000, CFI = 1.000, TLI = 1.000, and SRMR = .000. This is a just-identified model and the fit indices do not provide a good test of the fit of the model to the data.

Fitting the Full Mediation Model to the entire sample (with the path from GPF to SRDS constrained to zero) resulted in an overall model fit of $\chi^2(1, N = 2602) = 38.751$, $p = 0.000$, $\chi^2/df = 38.751$, GFI = .990, CFI = .977, TLI = .932, SRMR = .035, RMSEA = .120. All of these indices, with the exception of the RMSEA, indicated a good fit of the model to the data. The Chi-square Difference test indicated the Partial Mediating Model provided a better fit of the data, χ^2 difference($df = 1 - 0 = 1$) = $38.751 - .000 = 38.751$, $p = 0.000$.

The Partial Mediation Model accounted for 41% of the variance in Voice and 10% of the variance in SRDS. For the entire sample, the fit indices for the models are summarized in Table 5-34 and the standardized path estimates for the Partial Mediation Model are in Table 5-35.

For the entire sample, all three paths were significant. These results indicated that Voice partially mediated the relationship between GPF and SRDS. These results

replicated those found with the Baron and Kenny (1986) method. Results showed that for the entire sample, adolescents' perceptions of having the opportunity to provide input in the decision-making process and overall perceptions of fairness were associated with lower levels of deviant behavior. The perceived opportunity to provide input partially accounted for the relationship between overall perceptions of unfairness and deviant behavior.

The Partial and Full Mediation Models were then fit to the three subgroups based on offense type. Summaries of the model fit indices and path estimates for the four groups are provided in Tables 5-36 and 5-37. These indicated that the Partial Mediation Model fit the data for the NO sample well; however, the Full Mediation Model appeared to fit the data for NVO and VO groups better. For the NO group, in the Partial Mediation Model, all three paths were significant. These results showed that for adolescents who reported never engaging in deviant behavior, perceiving that they had the opportunity to provide input in the decision-making process partially accounted for the relationship between perceptions of overall fairness and lower levels of deviant behavior. These results were consistent with those found using the Baron and Kenny (1986) method.

For the NVO group, the Full Mediation Model was found to provide a better fit to the data. In this model, both paths, from Voice to GPF and Voice to SRDS were significant. These findings showed that for adolescents who reported engaging in nonviolent and status offenses, the perception that they had the opportunity to provide input in the decision-making process completely accounted for the relationship between overall perceptions of unfairness and deviant behavior.

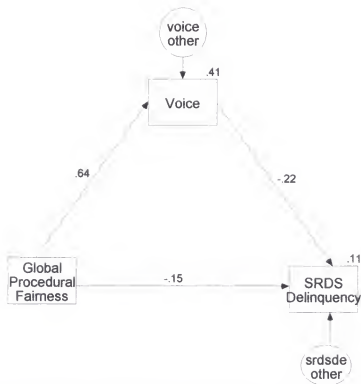


Figure 5-3. Revised Model 1, Partial Mediation Model of Voice on Global Procedural Fairness and Deviant Behavior for the Entire Sample, Standardized Path Coefficients Appear on Single-Headed Arrows; Squared Multiple Correlations of Endogenous Variables Appear at the Upper Right Corner of the Variable.

For the VO group, the Full Mediation Model also provided the better fit of the data to the model and both paths were significant. Similar to the results for the NVO group, for adolescents who reported engaging in violent offenses, perceptions of having input in the decision-making process completely accounted for the relationship between perceptions of unfairness overall and engaging in deviant behavior. The SEM analyses replicated the results found using the Baron and Kenny (1986) method to test the mediational models for VO group.

An alternative set of mediation models also was tested to assess the relationships among Voice, GPF, and SRDS. In this set of models, GPF was tested as a mediator in the relationship between Voice and SRDS. Again two models were tested: the Partial Mediation Model and the Full Mediation Model. In the Partial Mediation Model there

were three paths: (1) from Voice to GPF; (2) from GPF to SRDS; and (3) from Voice to SRDS. In the Full Mediation Model, only the first two of these paths were included, with the third constrained to zero. These models also were tested using SEM techniques and were initially tested with the entire sample.

The Partial Mediation Model resulted in an overall fit of $\chi^2(0, N = 2602) = .000$, GFI = 1.000, CFI = 1.000, TLI = 1.000, and SRMR = .000. This is a just-identified model and the fit indices do not provide a good test of the model. Fitting the Full Mediation Model to the entire sample resulted in an overall model fit of $\chi^2(1, N = 2602) = 82.384$, $p = 0.000$, $\chi^2/df = 82.384$, GFI = .980, CFI = .951, TLI = .854, SRMR = .042, and RMSEA = .177. The GFI, CFI, and SRMR indicated good fit, however, the other indices suggested less than adequate fit of the data to the model. The Chi-square difference tests comparing the two models indicated the Partial Mediation Model fit the data better than the Full Mediation Model, $\chi^2 \text{ difference}(df = 1 - 0 = 1) = 82.384 - .000 = 82.384$, $p = 0.000$ (Figure 5-4).

The Partial Mediation Model, in which GPF mediated the relationship between Voice and SRDS, accounted for 41% of the variance in GPF and 11% of the variance in SRDS. For the entire sample, the fit indices for the models are summarized in Table 5-38 and the standardized path estimates for the Partial Mediation Model are in Table 5-39.

For the entire sample, all three paths, from Voice to GPF, GPF to SRDS, and Voice to SRDS, were significant. The results showed that GPF partially mediated the relationship between Voice and SRDS. These results revealed that for the entire sample, adolescents' perceptions of being treated fairly overall and having input in the

decision-making process were associated with lower levels of deviant behavior. The perceived unfairness partially accounted for the relationship between perceptions of having input in the decision-making process and lower levels of deviant behavior.

The Partial and Full Mediation Models were then fit to the three subgroups based on offense type. Summaries of the model fit indices and the path estimates for the four groups are provided in Tables 5-40 and 5-41. These indicated that the Partial Mediation Model fit the data for the NO and VO groups well. However, the Full Mediation Model provided a better fit for the data for the NVO group. For the NO group, in the Partial Mediation Model, all three paths were significant. These results showed that, for adolescents who reported never engaging in deviant behavior, the results were similar to those for the entire sample. It appeared that perceptions of overall fairness partially mediated the relationship between the perception of having input in the decision-making process and lower levels of deviant behavior.

For the NVO group, the Full Mediation Model provided a better fit of the data to the model. In this model both paths from Voice to GPF and from GPF to SRDS were significant. These results showed that for those adolescents who reported nonviolent and/or status offenses, perceptions of having input in the decision-making process were associated with overall levels of fairness. Perceptions of overall fairness were associated with lower levels of deviant behavior. These results showed that perceptions of overall unfairness completely accounted for the relationship between having input and levels of deviant behavior.

For the VO group, in the Partial Mediation Model, the paths from Voice to GPF and Voice to SRDS were significant. The path between GPF and SRDS was not

significant. The results of the path estimates suggested that for those adolescents who reported engaging in violent offenses, perceptions of having input in the decision-making process alone accounted for levels of deviant behavior.

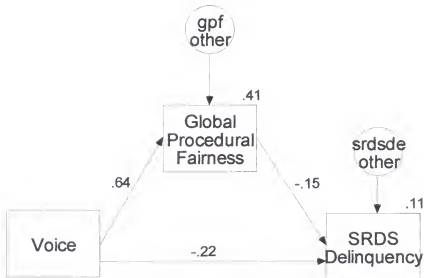


Figure 5-4. Model 3, Partial Mediation Model of Global Procedural Fairness on Voice and Deviant Behavior for the Entire Sample; Standardized Path Coefficients Appear on Single-Headed Arrows; Squared Multiple Correlations of Endogenous Variables Appear at the Upper Right Corner of the Variable.

The AIC values were used to compare the originally hypothesized model (in which Voice was the mediator) with the alternative model (in which GPF was the mediator) for each of the groups. For the entire sample and the NO group, the two Partial Mediation Models were compared. The AIC values were the same for each group, indicating both versions of the models fit the data for the entire sample and the NO group equally well. For the NVO group, the Full Mediation Models were compared. These values indicated the initial model, in which Voice was the mediator, provided a better fit than did the second version, in which GPF was the mediator. For the VO group, the hypothesized Full Mediation Model and the alternative Partial Mediation Model were compared. The AIC values also indicated the initial model provided a better fit than did the second version.

Differences in Procedural Justice Indices across Offense Groups

Hypothesis 6 predicted differences across the offense status groups on three indices of procedural justice: personal respect, status recognition, and voice. A multivariate analysis of covariance (MANCOVA) with planned repeated contrasts was conducted to test for group differences on these three constructs. The MANCOVA also included five of the six demographic variables that were found to vary by SRDS overall scores (age, ethnicity, grade, grades in school, and state) to control for the effects of these demographic variables on the relationships among group status and PR, SR, and Voice scores. Gender was not included as a covariate because gender was not significantly correlated with PR, SR, or Voice subscale scores. The MANCOVA showed grade, grades in school, and group status were significantly associated with the indices of procedural justice (Table 5-42). These findings were significant for all three multivariate test statistics appropriate for the comparison of more than two groups (in Study Two there were three groups: No Offense, Nonviolent and Status Offense Only, and Violent Offense).

The follow-up univariate tests also were significant (Table 5-43). These results showed that age, grade, grades in school, and group status were significantly associated with PR scores. Grade, grades in school, and group status were significantly associated with SR scores. Grade, grades in school, state, and group status were significantly associated with Voice scores. The means and standard deviations for the three groups separately for the PR, SR, and Voice scales are presented in Table 5-44. These results showed the offense groups differed significantly from each other on scores of feeling respected as individuals, feeling respected as family members, and perceiving they had

input in the decision-making process (even after controlling for age, ethnicity, grade, grades in school, and state).

The planned repeated contrasts explored the direction of offense group differences on the three dependent variables (PR, SR, and Voice). Repeated contrasts are pairwise comparisons of means, in which each group level's mean is compared to the mean of the level immediately after it (Wendorf, 2004). In the analyses for Study Two, the repeated contrasts compared (1) the means of the NO group and the means of the NVO group on PR, SR, and Voice, separately; and (2) the means of the NVO group and the means of the VO group on PR, SR, and Voice, separately.

For the PR scale, the first contrast compared the NO and NVO groups. This was significant ($p = .000$) and showed adolescents in the NO group had a higher mean PR score than the NVO group. The second contrast compared the NVO and VO groups and also was significant ($p = .001$). This analysis showed that the NVO group had a higher mean PR score than the VO group. These results showed that, consistent with Hypothesis 6, adolescents who reported never engaging in deviant behavior perceived their parents respected them the most as individuals followed by adolescents who reported engaging only in nonviolent and/or status offenses. Adolescents who reported violent offenses felt their parents respected them the least as individuals.

Both contrasts were significant for the SR scale ($p \leq .001$). The contrast analyses showed that adolescents who never engaged in deviant behavior also reported they felt the most respected as family members, while adolescents reporting violent offenses indicated they felt the least respected as family members. Adolescents reporting nonviolent offenses fell in between the other two groups. For the Voice scale, once again

the contrasts were significant ($p \leq .014$). The results showed that adolescents who reported never engaging in delinquent behavior felt they had more input into the decision-making process than those adolescents reporting nonviolent and violent offenses. Adolescents who reported nonviolent or status offenses only indicated they felt they had more input in the decision-making process than those adolescents who reported engaging in violent offenses.

Table 5-1

Ethnic Background

<u>Ethnicity</u>	<u>Number</u>	<u>Percent</u>
African American	460	18.5
Asian American	102	4.1
European American	822	33.1
Hispanic American	760	30.6
Native American/ American Indian	71	2.9
Multiracial	120	4.8
Other	147	5.9

Table 5-2

ANOVA for State and Deviant Behavior

<u>Source</u>	<u>Type III SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>
Corrected Model	25.141	4	6.285	13.014 ^a
Intercept	2376.883	1	2376.883	4921.594 ^a
State	25.141	4	6.285	13.014 ^a
Error	1244.561	2577	.483	
Total	7204.851	2582		
Corrected Total	1269.702	2581		

^a $p = .000$

Table 5-3

Means across States for Deviant Behavior

<u>State</u>	<u>Mean</u>	<u>Standard Error</u>
California	1.691	.034
Connecticut	1.385	.027
Florida	1.511	.022
New Jersey	1.470	.091
Texas	1.569	.033

Table 5-4

ANOVA for Grade and Deviant Behavior

<u>Source</u>	<u>Type III SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>
Corrected Model	9.198	2	4.599	9.509 ^a
Intercept	5949.588	1	5949.588	12302.322 ^a
Grade	9.198	2	4.599	9.509 ^a
Error	1250.629	2586	.484	
Total	7203.395	2589		
Corrected Total	1259.826	2588		

^a $p = .000$

Table 5-5

Means across Grade for Deviant Behavior

Grade	Mean	Standard Error
Sixth	1.449	.023
Seventh	1.510	.023
Eighth	1.596	.025

Table 5-6

ANOVA for Age and Deviant Behavior

Source	Type III SS	df	Mean Square	F
Corrected Model	74.300	6	12.383	27.107 ^a
Intercept	424.590	1	424.590	929.421 ^a
Age	74.300	6	12.383	27.107 ^a
Error	1154.873	2528	.457	
Total	7044.157	2535		
Corrected Total	1229.173	2534		

^a $p = .000$

Table 5-7

Means across Age for Deviant Behavior

Age	Mean	Standard Error
10 years	1.682	.338
11 years	1.373	.040
12 years	1.418	.023
13 years	1.534	.023
14 years	1.671	.030
15 years	1.720	.113
16 years	4.089	.255

Table 5-8

ANOVA for Gender and Deviant Behavior

Source	Type III SS	df	Mean Square	F
Corrected Model	32.982	1	32.982	70.001 ^a
Intercept	5220.490	1	5220.490	11079.831 ^a
Gender	32.982	1	32.982	70.001 ^a
Error	1090.289	2314	.471	
Total	6450.455	2316		
Corrected Total	1123.271	2315		

^a $p = .000$

Table 5-9

Means across Gender for Deviant Behavior

Gender	Mean	Standard Error
Female	1.423	.018
Male	1.669	.023

Table 5-10
ANOVA for Grades in School and Deviant Behavior

Source	Type III SS	df	Mean Square	F
Corrected Model	116.354	7	16.622	37.234 ^a
Intercept	1733.438	1	1733.438	3883.024 ^a
Grades in School	116.354	7	16.622	37.234 ^a
Error	1129.428	2530	.446	
Total	7076.120	2538		
Corrected Total	1245.782	2537		

^a $p = .000$

Table 5-11
Means across Grades in School for Deviant Behavior

Grades Earned in School	Mean	Standard Error
Mostly A's	1.284	.026
Mostly A's and B's	1.443	.023
Mostly B's	1.485	.044
Mostly B's and C's	1.679	.029
Mostly C's	2.045	.079
Mostly C's and D's	1.761	.053
Mostly D's	1.734	.167
Mostly D's and F's	2.236	.085

Table 5-12
ANOVA for Ethnicity and Deviant Behavior

Source	Type III SS	df	Mean Square	F
Corrected Model	13.845	6	2.307	4.906 ^a
Intercept	2605.087	1	2605.087	5539.058 ^a
Ethnicity	13.845	6	2.307	4.906 ^a
Error	1164.023	2475	.470	
Total	6828.518	2482		
Corrected Total	1177.868	2481		

^a $p = .000$

Table 5-13
Means across Ethnicity for Deviant Behavior

Ethnicity	Mean	Standard Error
African American	1.593	.032
American Indian/ Native American	1.509	.081
Asian American	1.391	.068
European American	1.426	.024
Hispanic American	1.528	.025
Multiracial	1.663	.063
Other	1.563	.057

Table 5-14

ANOVA for Socioeconomic Status and Deviant Behavior

Source	Type III SS	df	Mean Square	F
Corrected Model	4.207	4	1.052	2.466 ^a
Intercept	909.778	1	909.778	2133.189 ^b
SES	4.207	4	1.502	2.466 ^a
Error	578.317	1356	.426	
Total	3492.201	1361		
Corrected Total	582.524	1360		

^a $p < .05$ ^b $p = .000$

Table 5-15

Means across Socioeconomic Status for Deviant Behavior

Social Position	Mean	Standard Error
Level 1	1.461	.139
Level 2	1.456	.047
Level 3	1.399	.031
Level 4	1.478	.030
Level 5	1.562	.044

Table 5-16

Simultaneous Entry Regressions Predicting
Deviant Behavior Using Demographic Variables

	Deviant Behavior	
	First Equation	Second Equation
Age	.231 ^a	.231 ^a
African American	-.006	.006
American Indian	-.008	-.008
Asian American	-.037	-.037
European American	-.012	-.014
Hispanic American	-.077 ^a	-.075 ^a
Multiracial	.084 ^a	.083 ^a
Gender	-.146 ^a	-.145 ^a
Grade	-.101 ^a	-.101 ^a
Grades in School	.233 ^a	.236 ^a
SES	.020	-----
California	.111 ^a	.113 ^a
Connecticut	-.101 ^a	-.099 ^a
Florida	.008	-.011
Texas	.003	.002
Adjusted R ²	.140 ^a	.145 ^a

^a $p < .05$

Table 5-17

Hierarchical Regression Predicting Deviant Behavior Using Demographic Variables

		Deviant Behavior		
	Variable	R^2 Change	F change	β
Step 1	Grades in School	.084	202.932 ^a	.236 ^a
Step 2	Age	.021	50.706 ^a	.231 ^a
Step 3	Gender	.020	50.363 ^a	-.145 ^a
Step 4	California	.014	9.094	.113 ^a
	Connecticut	-----	-----	-.099 ^a
	Florida	-----	-----	-.011
	Texas	-----	-----	.002
Step 5	Grade	.004	10.048	-.101 ^a
Step 6	African American	.007	3.133	-.006
	American Indian	-----	-----	-.008
	Asian American	-----	-----	-.037
	European American	-----	-----	-.014
	Hispanic American	-----	-----	-.075 ^a
	Multiracial	-----	-----	.083 ^a

Note. Entries are standardized β weights for the sixth step of the hierarchical regression.

^a $p < .05$

Table 5-18
Multiple Regression Predicting Anger Arousal
Using Global Procedural Fairness and Demographic Variables

Variables	ES	NO	NVO	VO
Age	.054	.010	.071	-.004
African American	-.041	.066 ^a	-.051	-.017
American Indian	-.025	-.021	.098	-.194
Asian American	-.098 ^a	-.113 ^a	-.032	.097
European American	.013	.014	.047	.013
Hispanic American	-.028	-.038	.012	-.053
Multiracial	.070 ^a	.077 ^a	-.042	.064
Gender	.065 ^a	.061 ^a	.179 ^a	.149 ^a
Grade	-.006	-.022	-.024	.212 ^a
Grades in School	.119 ^a	.081 ^a	.075	.071
California	-.010	.025	-.052	-.180 ^a
Connecticut	-.027	-.046	.039	.153 ^a
Florida	.036	.040	-.076	.017
Texas	.024	.031	-.009	-.001
GPF	-.258 ^a	-.250 ^a	-.208 ^a	-.113 ^a
Adjusted R^2	.112 ^a	.089 ^a	.056 ^a	.149 ^a

Note. Entries are standardized β weights for the second step in the hierarchical regression.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

Table 5-19
Multiple Regression Predicting Deviant Behavior
Using Global Procedural Fairness and Demographic Variables

Variables	ES	NO	NVO	VO
Age	.209 ^a	.113 ^a	.015	.252 ^a
African American	.010	.096 ^a	-.117	-.210 ^a
American Indian	-.013	-.006	.093	.120
Asian American	-.037	-.052	-.065	.111
European American	-.023	-.032	.164	.040
Hispanic American	-.061 ^a	.034	-.161	-.238 ^a
Multiracial	.071 ^a	.025	.011	.036
Gender	-.157 ^a	-.121 ^a	-.050	-.137 ^a
Grade	-.119 ^a	.018	.043	-.140
Grades in School	.194 ^a	.089 ^a	.038	.067
California	.113 ^a	-.022	.157 ^a	.238 ^a
Connecticut	-.088 ^a	-.049	-.079	-.066
Florida	-.015	.038	.046	-.056
Texas	-.009	.016	.038	-.121 ^a
GPF	-.257 ^a	-.213 ^a	-.126 ^b	-.104 ^b
Adjusted R^2	.207 ^a	.112 ^a	.066 ^a	.107 ^a

Note. Entries are standardized β weights for the second step in the hierarchical regression.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

^b $p = .056$

Table 5-20
Multiple Regression Predicting Global Procedural Fairness
Using Personal Respect, Status Recognition, Demographic Variables

Variables	ES	NO	NVO	VO
Age	-.014	-.010	-.012	-.021
African American	-.002	.011	-.073	-.040
American Indian	-.009	-.018	-.037	.068
Asian American	.007	-.011	.096	-.077
European American	.029	.041 ^a	-.105	.029
Hispanic American	-.002	-.013	-.004	-.010
Multiracial	-.020	-.013	-.105	.031
Gender	-.019	-.022	-.053	-.039
Grade	-.002	-.015	.064	.001
Grades in School	-.005	-.002	.007	.019
California	-.011	-.014	.038	-.034
Connecticut	.003	.008	.012	-.050
Florida	-.029	-.030	.018	-.052
Texas	-.041 ^a	-.044 ^a	.008	-.073
PR	.462 ^a	.483 ^a	.263 ^a	.501 ^a
SR	.331 ^a	.311 ^a	.478 ^a	.227 ^a
Adjusted R^2	.571 ^a	.573 ^a	.502 ^a	.446 ^a

Note. Entries are standardized β weights for the second step in the hierarchical regression.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

Table 5-21

Multiple Regression Predicting Anger Arousal

Using Personal Respect, Status Recognition, and Demographic Variables

Variables	ES	NO	NVO	VO
Age	.049	.006	.070	-.003
African American	.036	.058 ^a	-.044	-.024
American Indian	-.025	-.025	.110	-.180
Asian American	-.098 ^a	-.111 ^a	-.043	.091
European American	.012	.013	.050	.006
Hispanic American	-.024	-.030	.005	-.056
Multiracial	.070 ^a	.079 ^a	-.038	.064
Gender	.065 ^a	.057 ^a	.174 ^a	.149
Grade	-.009	-.025	-.022	.208 ^a
Grades in School	.109 ^a	.071 ^a	.076	.068
California	-.014	.022	-.049	-.188 ^a
Connecticut	-.020	-.036	.043	-.145 ^a
Florida	.035	.042	-.074	.011
Texas	.024	.032	-.017	-.004
PR	-.078 ^a	-.053	-.210 ^a	.037
SR	-.227 ^a	-.238 ^a	-.019	-.118
Adjusted R^2	.128 ^a	.104 ^a	.058 ^a	.155 ^a

Note. Entries are standardized β weights for the second step in the hierarchical regression.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

Table 5-22

Hierarchical Regression for Mediation of Personal Respect on
Global Procedural Fairness and Anger Arousal Including Demographic Variables

Variables	ES	NO	NVO	VO
Equation One: PR (DV)				
African American	.027	.020	.096	.060
American Indian	.000	.005	.051	-.133
Asian American	-.011	-.022	-.009	.021
European American	-.042 ^a	-.056 ^a	.012	-.043
Hispanic American	.033	.037	-.058	.122 ^a
Multiracial	-.005	.015	-.013	-.060
Gender	-.002	-.007	-.114 ^a	.000
Grades in School	-.075 ^a	-.051 ^a	-.041	-.085 ^a
GPF	.708 ^a	.717 ^a	.613 ^a	.643 ^a
Adjusted R^2	.533 ^a	.537 ^a	.397 ^a	.440 ^a
Equation Two: AA (DV)				
African American	.033	.060 ^a	-.066	-.025
American Indian	-.025	-.024	.098	-.181
Asian American	-.097 ^a	-.108 ^a	-.035	.085
European American	.022	.026	.041	.016
Hispanic American	-.030	-.040	.016	-.059
Multiracial	.070 ^a	.074 ^a	-.043	.070
Gender	.065 ^a	.061 ^a	.192 ^a	.150 ^a
Grade	.001	-.015	-.003	.213 ^a
Grades in School	.127 ^a	.085 ^a	.083	.076
California	-.016	.016	-.047	-.183 ^a
Connecticut	-.027	-.044	.045	.148 ^a
Florida	.031	.036	-.070	.010
Texas	.019	.027	-.016	-.005
GPF	-.240 ^a	-.229 ^a	-.174 ^a	-.114 ^a
Adjusted R^2	.104 ^a	.080 ^a	.043 ^a	.149 ^a
Equation Three: AA (DV)				
African American	.037	.063 ^a	-.048	-.020
American Indian	-.025	-.023	.108	-.191
Asian American	-.099 ^a	-.111 ^a	-.037	.087
European American	.015	.018	.043	.012
Hispanic American	-.025	-.034	.006	-.049
Multiracial	.069 ^a	.076 ^a	-.045	.065
Gender	.065 ^a	.060 ^a	.170 ^a	.150 ^a
Grade	-.001	-.016	-.109	.211 ^a
Grades in School	.115 ^a	.078 ^a	.076	.069
California	-.016	.020	-.047	-.188 ^a
Connecticut	-.023	-.042	.043	.152 ^a
Florida	.034	.038	-.073	.015
Texas	.023	.029	-.016	.002
PR	-.162 ^a	-.143 ^a	-.186 ^a	-.081
GPF	-.125 ^a	-.126 ^a	-.060	-.062
Adjusted R^2	.116 ^a	.088 ^a	.060 ^a	.150 ^a

Note. Entries are standardized β weights for significant predictors across the four groups.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

Table 5-23

Hierarchical Regression for Mediation of Status Recognition on
Global Procedural Fairness and Anger Arousal Including Demographic Variables

Variables	ES	NO	NVO	VO
Equation One: SR (DV)				
African American	.008	-.006	.111	-.011
American Indian	-.001	-.011	.008	.049
Asian American	.002	-.010	-.040	.023
European American	-.032	-.042 ^a	.052	-.072
Hispanic American	.024	.038	.014	.001
Multiracial	-.006	.015	-.038	-.033
Grades in School	-.074 ^a	-.060 ^a	-.014	-.051
GPF	.677 ^a	.675 ^a	.677 ^a	.572 ^a
Adjusted R^2	.493 ^a	.485 ^a	.465 ^a	.331 ^a
Equation Two: AA (DV)				
African American	.033	.060 ^a	-.066	-.025
American Indian	-.025	-.024	.098	-.181
Asian American	-.097 ^a	-.108 ^a	-.035	.085
European American	.022	.026	.041	.016
Hispanic American	-.030	-.040	.016	-.059
Multiracial	.070 ^a	.074 ^a	-.043	.070
Gender	.065 ^a	.061 ^a	.192	.150 ^a
Grade	.001	-.015	-.003	.213 ^a
Grades in School	.127 ^a	.085 ^a	.083	.076
California	-.016	.016	-.047	-.183 ^a
Connecticut	-.027	-.044	.045	.148 ^a
Florida	.031	.036	-.070	.010
Texas	.019	.027	-.016	-.005
GPF	-.240 ^a	-.229 ^a	-.174 ^a	-.114 ^a
Adjusted R^2	.104 ^a	.080 ^a	.043 ^a	.149 ^a
Equation Three: AA (DV)				
African American	.035	.058 ^a	-.055	-.026
American Indian	-.026	-.027	.099	-.175
Asian American	-.097 ^a	-.110 ^a	-.039	.088
European American	.015	.017	.046	.007
Hispanic American	-.025	-.031	.018	-.059
Multiracial	.068 ^a	.077 ^a	-.047	.066
Gender	.063 ^a	.055 ^a	.189 ^a	.147 ^a
Grade	-.009	-.026	-.016	.209 ^a
Grades in School	.110 ^a	.072 ^a	.082	.069
California	-.015	.021	-.048	-.189 ^a
Connecticut	-.020	-.036	.042	.142 ^a
Florida	.032	.039	-.075	.008
Texas	.020	.028	-.015	-.008
SR	-.228 ^a	-.226 ^a	-.097	-.177 ^b
GPF	-.085 ^a	-.076 ^a	-.109	-.047
Adjusted R^2	.130 ^a	.105 ^a	.044 ^a	.155 ^a

Note. Entries are standardized β weights for significant predictors across the four groups.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

^b $p = .069$

Table 5-24

Model Goodness of Fit Indices for the Entire Sample for the Mediation of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA
Independence	4922.453	6	.000	.516	.000	.000	.790	.561
Partial Mediation	953.765	1	.000	.867	.806	-.163	.132	.605
Full Mediation	961.846	2	.000	.865	.805	.414	.143	.430
Partial Mediation With Covariance	.000	0	-----	1.000	1.000	-----	.000	-----
Full Mediation With Covariance	8.081	1	.004	.998	.999	.991	.039	.052

Table 5-25

Standardized Estimates for the Entire Sample for the
Partial Mediation Model with Covariance for Personal Respect
and Status Recognition on Global Procedural Fairness and Anger Arousal

Parameter	Estimate	Standard Error	Critical Ratio
GPF—PR	.725	.012	53.645 ^a
GPF—SR	.697	.011	49.627 ^a
GPF—AA	-.080	.053	-2.845 ^a
PR—AA	-.056	.069	-1.721
SR—AA	-.220	.072	-7.098 ^a

^a $p < .005$

Table 5-26

Model Goodness of Fit Indices for All Samples for the Mediation of Personal Respect and Status Recognition on Global Procedural Fairness and Anger Arousal

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA	AIC
Partial Mediation with Covariance—Entire Sample	.000	0	-----	.998	.999	-----	.039	-----	20.000
Full Mediation with Covariance—Entire Sample	8.081	1	.004	.998	.999	.991	.039	.052	26.081
Partial Mediation with Covariance—NO Group	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—NO Group	5.671	1	.017	.999	.999	.992	.035	.003	23.671
Partial Mediation with Covariance—NVO Group	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—NVO Group	.947	1	.331	.998	1.000	1.001	.042	.000	18.947
Partial Mediation with Covariance—VO Group	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—VO Group	.618	1	.432	.999	1.000	1.004	.032	.000	18.618

Table 5-27

Standardized Estimates for All Samples for the Partial
or Full Mediation Model with Covariance for Personal Respect
and Status Recognition on Global Procedural Fairness and Anger Arousal

Parameter	Estimate	Standard Error	Critical Ratio
Entire Sample (N = 2602), Partial Mediation Model with Covariance			
GPF—PR	.725	.012	53.645 ^a
GPF—SR	.697	.011	49.627 ^a
GPF—AA	-.080	.053	-2.845 ^a
PR—AA	-.056	.069	-1.721
SR—AA	-.220	.072	-7.098 ^a
PRother=SRother	.554	.015	24.717 ^a
No Offense Group (N = 1936), Partial Mediation Model with Covariance			
GPF—PR	.728	.014	46.775 ^a
GPF—SR	.692	.014	42.141 ^a
GPF—AA	-.079	.067	-2.383 ^a
PR—AA	-.012	.086	-.318
SR—AA	-.228	.086	-6.347 ^a
PRother=SRother	.547	.015	21.000 ^a
Nonviolent/Status Offense Group (N = 278), Full Mediation with Covariance			
GPF—PR	.629	.037	13.472 ^a
GPF—SR	.690	.032	15.844 ^a
PR—AA	-.256	.166	-2.964 ^a
SR—AA	-.006	.179	-.064
PRother=SRother	.545	.051	7.970 ^a
Violent Offense Group (N = 388), Full Mediation Model with Covariance			
GPF—PR	.655	.032	17.066 ^a
GPF—SR	.590	.029	14.371 ^a
PR—AA	-.012	.130	-.175
SR—AA	-.171	.157	-2.414 ^a
PRother=SRother	.525	.046	9.145 ^a

^a $p < .05$

Table 5-28

Model Goodness of Fit Indices for the Entire Sample for the Mediation of Global
Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA
Independence	4922.453	6	.000	.516	.000	.000	.790	.561
Partial Mediation	2428.478	1	.000	.767	.506	-1.962	.491	.966
Full Mediation	2523.228	3	.000	.755	.487	-.025	.503	.568
Partial Mediation								
With Covariance	.000	0	-----	1.000	1.000	-----	.000	-----
Full Mediation								
With Covariance	94.750	2	.000	.982	.981	.943	.144	.134

Table 5-29

Standardized Estimates for the Entire Sample for the
Partial Mediation Model with Covariance for Global Procedural Fairness
on Personal Respect/Status Recognition and Anger Arousal

Parameter	Estimate	Standard Error	Critical Ratio
PR—GPF	.462	.023	22.512 ^a
SR—GPF	.338	.025	16.474 ^a
GPF—AA	-.080	.053	-2.845 ^a
PR—AA	-.056	.069	-1.721
SR—AA	-.220	.072	-7.098 ^a
PR=SR	.779	.033	31.342 ^a

^a $p < .005$

Table 5-30

Model Goodness of Fit Indices for All Samples for the Mediation of
Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA	AIC
Partial Mediation with Covariance—Entire Sample									
	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—Entire Sample									
	94.750	2	.000	.982	.981	.943	.144	.134	110.750
Partial Mediation with Covariance—NO Group									
	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—NO Group									
	59.812	2	.000	.985	.984	.952	.121	.122	75.812
Partial Mediation with Covariance—NVO Group									
	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—NVO Group									
	8.525	2	.014	.985	.985	.955	.121	.109	24.525
Partial Mediation with Covariance—VO Group									
	.000	0	-----	1.000	1.000	-----	.000	-----	20.000
Full Mediation with Covariance—VO Group									
	5.908	2	.052	.992	.992	.977	.084	.071	21.908

Table 5-31

Standardized Estimates for All Samples for the Partial or Full Mediation Model with Covariance for Global Procedural Fairness on Personal Respect/Status Recognition and Anger Arousal

Parameter	Estimate	Standard Error	Critical Ratio
Entire Sample (N = 2602), Partial Mediation Model with Covariance			
PR—GPF	.462	.023	22.512 ^a
SR—GPF	.338	.025	16.474 ^a
GPF—AA	-.080	.053	-2.845 ^a
PR—AA	-.056	.069	-1.721
SR—AA	-.220	.072	-7.098 ^a
PR=SR	.779	.033	31.342 ^a
No Offense Group (N = 1936), Partial Mediation Model with Covariance			
PR—GPF	.482	.027	20.471 ^a
SR—GPF	.319	.028	13.557 ^a
GPF—AA	-.079	.067	-2.383 ^a
PR—AA	-.012	.086	-.318
SR—AA	-.228	.086	-6.347 ^a
PR=SR	.774	.034	26.933 ^a
Nonviolent/Status Offense Group (N = 278), Partial Mediation Model with Covariance			
PR—GPF	.262	.078	4.174 ^a
SR—GPF	.495	.084	7.879 ^a
GPF—AA	-.080	.127	-.974
PR—AA	-.235	.171	-2.643 ^a
SR—AA	-.034	.198	.359
PR=SR	.741	.098	9.908 ^a
Violent Offense Group (N = 388), Full Mediation Model with Covariance			
PR—GPF	.476	.063	9.033 ^a
SR—GPF	.253	.076	4.802 ^a
GPF—AA	-.138	.078	-2.733 ^a
PR=SR	.707	.082	11.354 ^a

^a $p < .05$

Table 5-32
Multiple Regression Predicting Deviant Behavior
Using Voice and Demographic Variables

Variables	ES	NO	NVO	VO
Age	.209 ^a	.115 ^a	.016	.247 ^a
African American	-.001	.081 ^a	-.108	-.196 ^a
American Indian	-.006	-.003	.107	-.123
Asian American	-.033	-.046	-.065	.103
European American	-.020	-.024	.158 ^a	.017
Hispanic American	-.066 ^a	.034	-.172 ^a	-.236 ^a
Multiracial	.071 ^a	.019	.008	.048
Gender	-.153 ^a	-.119 ^a	-.038	-.145 ^a
Grade	-.118 ^a	.020	.040	-.140 ^a
Grades in School	.196 ^a	.091 ^a	.051	.063
California	.109 ^a	-.027	.160 ^a	.229 ^a
Connecticut	-.081 ^a	-.043	-.076	-.070
Florida	-.009	.043	.056	-.052
Texas	-.005	.021	.045	-.128 ^a
Voice	-.263 ^a	-.208 ^a	-.154 ^a	-.177 ^a
Adjusted R^2	.210 ^a	.110 ^a	.073 ^a	.127 ^a

Note. Entries are standardized β weights for the second step in the hierarchical regression.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group

^a $p < .05$

Table 5-33

Regression Analyses for the Mediation of Voice on Global Procedural Fairness and Deviant Behavior Including Demographic Variables

Variables	ES	NO	NVO	VO
Equation One: Voice (DV)				
African American	.001	-.036	.114	.118
American Indian	.018	.012	.090	-.053
Asian American	.012	.009	.033	.002
European American	-.021	-.009	-.027	-.151 ^a
Hispanic American	.003	.020	-.090	.050
Multiracial	-.015	-.014	-.036	.034
Grades in School	-.060 ^a	-.044 ^a	.042	.056
California	.001	.015	.002	-.052
Connecticut	.037 ^a	.036	-.003	-.009
Florida	.033	.028	.037	.055
Texas	.013	.019	.082	-.026
GPF	.622 ^a	.631 ^a	.593 ^a	.480 ^a
Adjusted R ²	.414 ^a	.418 ^a	.367 ^a	.252 ^a
Equation Two: SRDS (DV)				
Age	.209 ^a	.114 ^a	.013	.252 ^a
African American	.002	.090	-.126	-.218 ^a
American Indian	-.013	-.007	.092	.133
Asian American	-.036	-.048	-.064	.096
European American	-.014	-.022	.156	.042
Hispanic American	-.063 ^a	.031	-.159	-.239 ^a
Multiracial	.071 ^a	.022	.004	.041
Gender	-.157 ^a	-.119 ^a	-.047	-.140 ^a
Grade	-.112 ^a	.026	.054	-.141
Grades in School	.201 ^a	.096 ^a	.042	.069
California	.107 ^a	-.030	.162 ^a	.229 ^a
Connecticut	-.087 ^a	-.048	-.075	-.073
Florida	-.020	.036	.050	-.064
Texas	-.014	.014	.034	-.127 ^a
GPF	-.242 ^a	-.172 ^a	-.131 ^a	-.145 ^a
Adjusted R ²	.200 ^a	.097 ^a	.067 ^a	.118 ^a
Equation Three: SRDS (DV)				
Age	.204 ^a	.112 ^a	.017	.248 ^a
African American	.002	.084 ^a	-.112	-.202 ^a
American Indian	-.009	-.006	.103	.126
Asian American	-.034	-.047	.060	.096
European American	-.018	-.023	.153	.021
Hispanic American	-.063 ^a	.035	-.170 ^a	-.232 ^a
Multiracial	.068 ^a	.020	.000	.046
Gender	-.157 ^a	.122 ^a	-.046	-.148 ^a
Grade	-.119 ^a	.018	.042	-.142
Grades in School	.190 ^a	.088 ^a	.047	.061
California	.107 ^a	-.027	.162 ^a	.222 ^a
Connecticut	-.080 ^a	-.042	-.076	-.074
Florida	-.014	.040	.054	-.056
Texas	-.012	.018	.043	-.131 ^a
Voice	-.184 ^a	-.165 ^a	-.117	-.138 ^a
GPF	-.127 ^a	-.068 ^a	-.062	-.079
Adjusted R ²	.219 ^a	.112 ^a	.072 ^a	.129 ^a

Note. Entries are standardized β weights for significant predictors across the four groups.

Note. ES corresponds to values for the Entire Sample; NO corresponds to values for the No Offense group; NVO corresponds to values for the Nonviolent/Status Offense group; VO corresponds to values for the Violent Offense group.

^a $p < .05$

Table 5-34

Model Goodness of Fit Indices for the Entire Sample for the Mediation
for Voice on Global Procedural Fairness and Deviant Behavior

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA
Independence	1677.966	3	.000	.717	.000	.000	.432	.463
Partial Mediation	.000	0	----	1.000	1.000	----	.000	----
Full Mediation	38.751	1	.000	.990	.977	.932	.035	.120

Table 5-35

Standardized Estimates for the Entire Sample for the Partial Mediation Model
for Voice on Global Procedural Fairness and Deviant Behavior

Parameter	Estimate	Standard Error	Critical Ratio
GPF—Voice	.639	.012	42.393 ^a
GPF—SRDS	-.150	.012	-6.248 ^a
Voice—SRDS	-.220	.015	-9.149 ^a

^a $p < .005$

Table 5-36

Model Goodness of Fit Indices for All Samples for the Partial and Full Mediation Models
for Voice on Global Procedural Fairness and Deviant Behavior

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA	AIC
Partial Mediation—Entire Sample	.000	0	----	1.000	1.000	----	.000	----	12.000
Full Mediation—Entire Sample	38.751	1	.000	.990	.977	.932	.035	.120	48.751
Partial Mediation—NO Group	.000	0	----	1.000	1.000	----	.000	-----	12.000
Full Mediation—NO Group	7.613	1	.006	.997	.994	.983	.005	.058	17.613
Partial Mediation—NVO Group	.000	0	----	1.000	1.000	----	.000	-----	12.000
Full Mediation—NVO Group	1.020	1	.312	.998	1.000	1.000	.009	.009	11.020
Partial Mediation—VO Group	.000	0	-----	1.000	1.000	-----	.000	-----	12.000
Full Mediation—VO Group	1.591	1	.207	.997	.995	.986	.026	.039	11.591

Table 5-37

Standardized Estimates for All Samples for the Partial or Full Mediation Model for Voice on Global Procedural Fairness and Deviant Behavior

Parameter	Estimate	Standard Error	Critical Ratio
Entire Sample (N = 2602), Partial Mediation Model			
GPF—Voice	.639	.012	42.393 ^a
GPF—SRDS	-.150	.012	-6.248 ^a
Voice—SRDS	-.220	.015	-9.149 ^a
No Offense Group (N = 1936), Partial Mediation Model			
GPF—Voice	.644	.015	37.016 ^a
GPF—SRDS	-.080	.004	-2.762 ^a
Voice—SRDS	-.187	.005	-6.498 ^a
Nonviolent/Status Offense Group (N = 278), Full Mediation Model			
GPF—Voice	.593	.037	12.263 ^a
Voice—SRDS	-.162	.017	-2.726 ^a
Violent Offense Group (N = 388), Full Mediation Model			
GPF—Voice	.497	.030	11.264 ^a
Voice—SRDS	-.212	.039	-4.259 ^a

^a $p < .05$

Table 5-38

Model Goodness of Fit Indices for the Entire Sample for the Mediation of Global Procedural Fairness on Voice and Deviant Behavior

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA
Independence	1677.966	3	.000	.717	.000	.000	.432	.463
Partial Mediation	.000	0	-----	1.000	1.000	-----	.000	-----
Full Mediation	82.384	1	.000	.980	.951	.854	.042	.177

Table 5-39

Standardized Estimates for the Entire Sample for the Partial Mediation Model
for Global Procedural Fairness on Voice and Deviant Behavior

Parameter	Estimate	Standard Error	Critical Ratio
Voice—GPF	.639	.018	42.393 ^a
GPF—SRDS	-.150	.012	-6.248 ^a
Voice—SRDS	-.220	.015	-9.149 ^a

^a $p < .005$

Table 5-40

Model Goodness of Fit Indices for All Samples for the Mediation of
Global Procedural Fairness on Voice and Deviant Behavior

Model	Chi-square	df	p	GFI	CFI	TLI	SRMR	RMSEA	AIC
Partial Mediation—Entire Sample	.000	0	-----	1.000	1.000	-----	.000	-----	12.000
Full Mediation—Entire Sample	82.384	1	.000	.980	.951	.854	.042	.177	92.384
Partial Mediation—NO Group	.000	0	-----	1.000	1.000	-----	.000	-----	12.000
Full Mediation—NO Group	41.771	1	.000	.986	.965	.894	.009	.145	51.771
Partial Mediation—NVO Group	.000	0	-----	1.000	1.000	-----	.000	-----	12.000
Full Mediation—NVO Group	2.545	1	.111	.994	.988	.963	.011	.075	12.545
Partial Mediation—VO Group	.000	0	-----	1.000	1.000	-----	.000	-----	12.000
Full Mediation—VO Group	9.351	1	.002	.984	.934	.801	.044	.147	19.351

Table 5-41

Standardized Estimates for All Samples for the Partial or Full Mediation Model
for Global Procedural Fairness on Voice and Deviant Behavior

Parameter	Estimate	Standard Error	Critical Ratio
Entire Sample (N = 2602), Partial Mediation Model			
Voice—GPF	.639	.018	42.393 ^a
GPF—SRDS	-.150	.012	-6.248 ^a
Voice—SRDS	-.220	.015	-9.149 ^a
No Offense Group (N = 1936), Partial Mediation Model			
Voice—GPF	.644	.020	37.016 ^a
GPF—SRDS	-.080	.004	-2.762 ^a
Voice—SRDS	-.187	.005	-6.498 ^a
Nonviolent/Status Offense Group (N = 278), Full Mediation Model			
Voice—GPF	.593	.064	12.263 ^a
Voice—SRDS	-.144	.013	-2.423 ^a
Violent Offense Group (N = 388), Partial Mediation Model			
Voice—GPF	.497	.065	11.264 ^a
GPF—SRDS	-.072	.030	-1.263
Voice—SRDS	-.176	.045	-3.076 ^a

^a $p < .05$

Table 5-42
Multivariate Analyses for Procedural Justice Indices,
Group Status, and Select Demographic Variables

Effect	Value	F	Hypothesis <i>df</i>	Error <i>df</i>
Intercept				
Pillai's Trace	.127	113.107 ^a	3	2339
Wilks' Lambda	.873	113.107 ^a	3	2339
Roy's Largest Root	.145	113.107 ^a	3	2339
Age				
Pillai's Trace	.002	1.375	3	2339
Wilks' Lambda	.998	1.375	3	2339
Roy's Largest Root	.002	1.375	3	2339
Ethnicity				
Pillai's Trace	.001	.841	3	2339
Wilks' Lambda	.999	.841	3	2339
Roy's Largest Root	.001	.841	3	2339
Grade				
Pillai's Trace	.003	2.640 ^b	3	2339
Wilks' Lambda	.997	2.640 ^b	3	2339
Roy's Largest Root	.003	2.640 ^b	3	2339
Grades in School				
Pillai's Trace	.010	7.527 ^a	3	2339
Wilks' Lambda	.990	7.527 ^a	3	2339
Roy's Largest Root	.010	7.527 ^a	3	2339
State				
Pillai's Trace	.002	1.369	3	2339
Wilks' Lambda	.998	1.369	3	2339
Roy's Largest Root	.002	1.369	3	2339
Offense Group Status				
Pillai's Trace	.065	26.109 ^a	6	4680
Wilks' Lambda	.935	26.522 ^a	6	4678
Roy's Largest Root	.068	53.150 ^a	3	2340

^a $p = .000$

^b $p = .048$

Table 5-43
Univariate Analyses for Procedural Justice Indices,
Group Status, and Select Demographic Variables

Source	Type III SS	df	Mean Square	F
Corrected Model				
Personal Respect	359.074	7	51.296	39.851 ^a
Voice	261.553	7	37.365	32.620 ^a
Status Recognition	293.990	7	41.999	37.834 ^a
Intercept				
Personal Respect	360.125	1	360.125	279.772 ^a
Voice	301.632	1	301.632	263.332 ^a
Status Recognition	313.346	1	313.346	282.274 ^a
Age				
Personal Respect	5.165	1	5.165	4.013 ^b
Voice	3.085	1	3.085	2.694
Status Recognition	3.069	1	3.069	2.765
Ethnicity				
Personal Respect	3.025	1	3.025	2.350
Voice	.824	1	.824	.719
Status Recognition	.972	1	.972	.876
Grade				
Personal Respect	7.949	1	7.949	6.167 ^b
Voice	6.631	1	6.631	5.789 ^b
Status Recognition	7.864	1	7.864	7.084 ^b
Grades in School				
Personal Respect	24.345	1	24.345	18.913 ^a
Voice	15.402	1	15.402	13.447 ^a
Status Recognition	22.756	1	22.756	20.499 ^a
State				
Personal Respect	2.225	1	2.225	1.728
Voice	1.949	1	1.949	1.701
Status Recognition	4.466	1	4.466	4.024 ^b
Offense Group Status				
Personal Respect	180.637	2	90.319	70.166 ^a
Voice	136.469	2	68.234	59.570 ^a
Status Recognition	141.725	2	70.863	63.836 ^a
Error				
Personal Respect	3013.349	2341	1.287	
Voice	2681.486	2341	1.145	
Status Recognition	2598.691	2341	1.110	
Total				
Personal Respect	36415.861	2349		
Voice	33630.889	2349		
Status Recognition	34256.500	2349		
Corrected Total				
Personal Respect	3372.423	2348		
Voice	2943.039	2348		
Status Recognition	2892.681	2348		

^a $p = .000$

^b $p < .05$

Table 5-44

Means for Group Status on Personal Respect, Voice, and Status Recognition

Group	Personal Respect		Voice		Status Recognition	
	Mean	SE	Mean	SE	Mean	SE
No Offense	3.913	.027	3.754	.026	3.800	.025
Nonviolent/Status Offense	3.445	.073	3.376	.069	3.340	.068
Violent Offense	3.129	.064	3.063	.060	3.123	.059

CHAPTER 6 CONCLUSIONS

The focus of the present study was to further explore and expand on Fondacaro and colleagues' (Jackson & Fondacaro, 1999; Fondacaro, Jackson, and Luescher (2002) working model focusing on the causes and consequences of family conflict in adolescence. A considerable body of evidence in the family functioning literature suggests that high levels of ongoing family conflict and low levels of family cohesion are associated with increases in deviant and externalizing behavior, as well as decreased psychological well-being evidenced by internalizing symptoms (Ary, Duncan, Duncan, & Hops, 1999; Daniels & Moos, 1990; Formoso, Gonzales, & Aiken, 2000; Fraser, 1996; Gehring, Wentzel, Feldman, & Munson, 1990; Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Holmbeck & O'Donnell, 1991; McCord, 1991; Moffitt, 1993; Montemayor, 1986; Shek, 1998; Wentzel & Feldman, 1996).

Fondacaro, Dunkle, and Pathak (1998) and Fondacaro and Jackson (1999) established a link between older adolescents' perceptions of the overall fairness of family conflict resolution procedures and both general levels of family conflict and cohesion. Diamond, Luescher, and Fondacaro (2001) replicated these findings with a sample of younger adolescents. Fondacaro and colleagues (Fondacaro et al., 1998; Jackson & Fondacaro, 1999) suggested procedural justice as a link between family functioning and adolescent behavior. They proposed that adolescents who perceive their parents treat them unfairly, especially on an ongoing basis, are likely to experience anger arousal. For

some adolescents, unresolved angry feelings may translate into increased deviant and aggressive behavior.

The present study sought to further explore the relationships among family functioning, procedural justice, identity orientation, and deviant behavior, and to test aspects of Fondacaro and colleagues' working model. To that end, the present study had six goals, corresponding to the six hypotheses under investigation in the present study. The first goal was to replicate the previous finding that perceptions of procedural justice are related to levels of family conflict and cohesion, even after controlling for severity of conflict. These relationships were the focus of Hypothesis 1 and the results were consistent with those shown in previous studies. The findings showed levels of conflict and cohesion within the family were associated with adolescent perceptions of fairness by parents in resolving family conflict.

Hypothesis 1 was addressed using regression methods in Study One. These analyses controlled for the severity of conflict reported by the adolescents. This sample was younger and from a different region of the country than those sampled in previous studies. These results showed adolescents' perceptions of their family's general level of closeness, helpfulness, and supportiveness were positively associated with overall levels of fairness based on the adolescents' appraisal of parental fairness in resolving a specific family conflict. The results also showed adolescents' perceptions of family conflict, focusing on expressions of anger and physical aggression within the family, were negatively associated with global justice appraisals, again based on the adolescents' reported family conflict scenario.

These findings suggested that adolescents' beliefs about the fairness or unfairness of the process of resolving a specific family conflict may influence levels of conflict and cohesion within the family. It may also be that adolescents' perceptions about the degree of conflict and cohesion within the family impact the general atmosphere in the family, with regard to notions of fairness and appropriate, respectful treatment. It is likely that the constructs of conflict/cohesion and procedural justice have reciprocal relationships with one another. Although the present cross-sectional study cannot address any causal relationships among these variables, future longitudinal research can provide further insight into the specifics of these relationships.

Anger Arousal, Deviant Behavior, and Global Procedural Fairness

The second goal of the present study was to replicate previous findings of relationships between adolescent perceptions of overall unfairness in the process of resolving family conflict and both feelings of anger and deviant behavior. The findings in the present studies were consistent with Hypothesis 2, and indicated adolescent perceptions of unfairness were associated with both negative emotional states and deviant behavior. These relationships were assessed in both Study One and Study Two.

The analyses in Study One controlled for the severity of the conflict reported by the adolescents. In Study Two, the analyses controlled for the following demographic variables: age, ethnicity, gender, grade, grades in school, and state. Adolescents in Study One who perceived their parents did not treat them fairly in the resolution of a specific conflict reported higher levels of both anger and negative emotional response, in response to that same conflict. The results from Study Two revealed a modest, inverse relationship between global procedural fairness and general feelings of anger and irritability. A

similar relationship was found with deviant behavior: global procedural justice was moderately, negatively associated with deviant behavior.

The relationship between perceptions of overall fairness and angry/irritable feelings was revealed not only for the entire sample of Study Two, but also for the subgroups based on offense type. Examining the magnitude of the results across the three subgroups, the relationship between overall procedural fairness and angry and irritable feelings appeared stronger for the adolescents who reported engaging in no delinquent offenses over the past year. For those adolescents who reported engaging in violent offenses, the correlation between overall fairness and anger/irritability was significant, but was smaller than that for adolescents in the no offense group and those in the nonviolent/status offense group.

It may be that for adolescents who act out aggressively, perceptions of parental fairness play a smaller role in the development of general angry and irritable feelings than for adolescents who engage in nonaggressive forms of deviant behavior or those who do not engage in deviant behavior. In other words, for adolescents who engage in aggressive forms of delinquency, a greater number of factors may contribute to their experiences of anger and irritability. A number of other factors could account for the development of these negative feelings in aggressive youth, in addition to perceptions of the overall fairness provided by parents in resolving family conflict. Two possible explanations at the individual level, which may add value to future studies of procedural justice, are temperament/personality styles and attributional styles.

The results of the analyses of the relationships between overall perceptions of fairness and deviant behavior varied across the three groups based on offense type in

Study Two. For the adolescents who reported never engaging in deviant behavior, the findings were similar to those of the entire sample, in that perceptions of overall fairness in the process of resolving family conflict were negatively associated with levels of deviant behavior. The findings for the adolescents who reported engaging in nonviolent and status offenses and those who reported engaging in violent offenses were nonsignificant; however, the results for both of these groups approached significance.

Analyses testing the relationship between deviant behavior and global procedural fairness for these groups in Study Two (that did not control for the demographic variables) were significant. The addition of the demographic variables to these analyses necessitated adding 14 predictors to the regression equations. Also, the samples for each of these groups were substantially smaller than those used for the analyses of the entire sample or the sample of adolescents who denied engaging in deviant behavior. It may be that these smaller sample sizes did not provide adequate power to successfully assess the relationship between global procedural fairness and deviant behavior while controlling for the demographic variables for these two groups. The nearly significant p-value for these analyses (.056) suggests that future analyses with larger samples of adolescents who engaged in nonviolent or violent offenses would likely reveal a significant inverse relationship between adolescent perceptions of overall fairness in the family and delinquent and deviant behaviors.

It is also possible, however, that the effects of the demographic variables on deviant behavior accounted for the previously achieved relationships between perceptions of fairness and deviant behavior, when the demographic variables were not included. For the adolescents who engage in nonviolent and status offenses, the state in which the

adolescent resides was significantly related to deviant behavior. For the violent adolescents, a number of demographic variables were associated with deviant behavior. These included age, ethnicity, gender, and state. These variables were also associated with deviant behavior for the entire sample, as well as grades in school and grade. The finding that perceptions of fairness were also associated with levels of deviant behavior for the entire sample (above and beyond the effects of the demographic variables), provides some support for the suggestion that the sample size of the analyses for the nonviolent and violent offending groups impacted the ability to achieve a significant relationship between perceptions of fairness and deviant behavior.

Personal Respect and Status Recognition

The third goal of the present study was to explore two possible pathways from perceptions of injustice to anger arousal. One pathway focuses on status recognition, which is based on Tyler's identity-based relational model (Tyler, 1994; Tyler & Blader, 2000; Tyler & Lind, 1992; Tyler, Boekmann, Smith, & Huo, 1997; Tyler & Smith, 1999). Tyler's model posits that injustice by group authorities provides important information to individuals about their status within the group. Specifically, unfair treatment is believed to imply the person has little importance or value to the group. In the particular context of the present study, the authority figure is the parent, who, through unfair family conflict-resolution procedures, conveys the message to the adolescent that he or she is not an important member of the family. This in turn may fuel feelings of anger.

Fondacaro and colleagues (Jackson & Fondacaro, 1999; Fondacaro et al., 2002) suggest a second path between justice appraisals and anger: personal respect, which focuses more on human dignity, rather than social status as a family member. For some adolescents, the family may be an important reference group; these adolescents may

focus more on status recognition. For others, being treated with dignity as unique individuals, independent of the family reference group, may be more important. These adolescents may focus more on personal respect. Luescher, Fondacaro, and McNatt (2001) established relationships among personal respect, status recognition, global procedural fairness, and anger arousal in a sample of older adolescents. Jackson and Fondacaro (1999) found that perceptions of both personal respect and status recognition were associated with deviant behavior in a sample of older adolescents. Diamond et al. (2001) replicated this finding with a sample of younger adolescents.

The present study seeks to reveal relationships among these variables and to evaluate personal respect and status recognition as mediators in the relationship between overall perceptions of unfairness and anger arousal. This was the focus of Hypothesis 3. The results overall were consistent with the hypothesis and mediational relationships were revealed in Study Two. The findings also suggested differences in some of these relationships across the groups based on offense type in Study Two.

The relationships focused on in Hypothesis 3 were assessed in both Study One and Study Two and were established in three steps. First, the relationships between overall perceptions of fairness and both personal respect and status recognition were assessed. Second, the relationships between anger arousal and both personal respect and status recognition were evaluated. Third, personal respect and status recognition were tested as mediators in the relationship between perceptions of fairness and anger arousal. Each of these steps was analyzed using regression techniques. In Study One the regression analyses controlled for conflict severity, and in Study Two they controlled for the demographic variables.

The mediational analyses were also assessed using Structural Equation Modeling (SEM) techniques. The regression and SEM methods answered similar, but somewhat different questions regarding the nature of the mediating mechanisms. The series of regressions tested whether personal respect and status recognition separately mediated the relationship between global procedural fairness and anger arousal. The SEM analyses focused on the simultaneous mediational effects of personal respect and status recognition.

Results for both Study One and Study Two revealed perceptions of being respected as a person and as a family member were associated with perceptions of overall fairness. The relationship between personal respect and overall fairness was stronger than was the relationship between status recognition and overall fairness for the entire samples in Studies One and Two. The relationships between personal respect/status recognition and global procedural fairness were also analyzed for each of the subgroups in Study Two. For adolescents who reported never engaging in deviant behavior and those who reported engaging in violent offenses, results were similar to those found for the entire sample. For adolescents who reported engaging in nonviolent and status offenses, the opposite result was revealed: there was a stronger relationship between being respected as a family member and overall perceptions of fairness.

The results for both Studies One and Two also revealed perceptions of being respected as individuals and as family members were independently related to anger arousal. In Study Two, status recognition had a stronger relationship with anger arousal than did personal respect for the entire sample. The analyses of the subgroups based on offense type revealed only one of either personal respect or status recognition was

significantly related to anger arousal in these groups. For the nonoffending adolescents, perceptions of being disrespected as a family member were associated with general feelings of anger and irritability. For the nonviolent and status offending adolescents, only perceptions of being disrespected as an individual were associated with general feelings of anger and irritability.

In the analyses for the violent adolescents, both perceptions of being disrespected as an individual and as a family member were associated with general feelings of anger and irritability. However, this result was achieved when only one or the other of these perceptions was included in the analyses. When both perceptions were included, neither was independently associated with angry and irritable feelings. It appears that for the sample in Study Two (when the demographic variables were controlled for) the individual and family level perceptions of respect, when combined, inhibited the effect of the other. In previous analyses that did not include the demographic variables (for this group in Study Two) these results were not revealed. It appears that, for the adolescents who reported engaging in violent offenses, the demographic variables (particularly gender and the state in which the adolescent resides) partially accounted for angry and irritable feelings, and attenuated the relationships among perceptions of personal and familial respect on anger and irritability.

The regression analyses of a mediating mechanism in Study Two were conducted separately for the entire sample and for each of the three offense-type groups. Results of the analyses for the entire sample and the group of nonoffending adolescents suggested adolescent perceptions of both being respected as individuals and as family members separately mediated the relationship between overall perceptions of fairness and general

feelings of anger and irritability. For the group of nonviolent and status offending adolescents, the regression analyses indicated that personal respect alone completely mediated the relationship between global procedural fairness and anger arousal.

The results of the regression mediation analyses for the violent offenders were nonsignificant; however, the analyses for complete mediation by status recognition did approach significance. Once again, this result may have been due to the relatively small sample size and the inclusion of the numerous demographic variables in the regression analyses. Analyses for the violent offenders in Study Two, which excluded the demographic variables, showed that perceptions of being respected as a family member completely mediated the relationship between overall perceptions of fairness and anger arousal. Future, larger scale studies can determine if the present findings, in which no mediation was indicated, are robust, or if the demographic variables (including gender, grade, and state) weakened the effect of status recognition as a mediator.

The mediational analyses were also tested with a series of structural equation models. In all, eight models were tested to assess the relationships among personal respect, status recognition, global procedural fairness, and anger arousal. Four of these models were based on the hypothesized relationships among these variables, such that personal respect and status recognition were the mediators in the models. The other four models were based on an alternative model which hypothesized global procedural fairness mediated the relationships between personal respect/status recognition and anger arousal. These eight models varied along three dimensions. The first dimension differed as to whether the model was based on the hypothesized or alternative relationships. The second dimension focused on the inclusion or exclusion of a covariance between either

personal respect and status recognition or between the error terms associated with these variables. The third dimension varied as whether the model predicted full or partial mediation.

The SEM analyses necessitated a determination of which of the two sets of models best fit the data. The two sets of models varied as to which variable(s) played the role of the mediator: personal respect/status recognition or global procedural fairness. Selecting between alternative models should be based on the fit of the models to the data as well as theoretical considerations. The fit indices could only provide guidance with regard to selecting between the models for the nonviolent and violent adolescents. These values indicated the hypothesized models, in which personal respect and status recognition mediated the relationship between global procedural fairness and anger arousal, provided the best fit.

The models for the entire sample and nonoffending adolescents revealed that the Partial Mediation Model with Covariance best fit the data. The path estimates suggested status recognition partially mediated the relationship between global procedural fairness and anger/irritability for both groups. The results of the SEM analyses differed from the regression analyses for these two groups, which assessed the possible mediating effects of personal respect and status recognition separately. The SEM results suggested that for the entire sample and the nonoffending adolescents (when both variables were simultaneously assessed as mediators), perceptions of being respected as an individual no longer significantly mediated the relationship between anger arousal and global procedural fairness; however, perceptions of being respected within the family did mediate this relationship.

For both the nonviolent and violent offenders, the Full Mediation Model with Covariance provided the best fit to the data. The path estimates for the nonviolent group suggested personal respect completely mediated the relationship between global procedural fairness and angry and irritable feelings. This was consistent with the regression analyses. For the violent group, the path estimates for the Full Mediation Model with Covariance suggested status recognition completely mediated the relationship between anger arousal and global procedural fairness.

The results of the analyses for Hypothesis 3 are interesting in that, overall, the impact of the personal and familial respect variables on global procedural fairness were in the opposite direction of the effect of those same variables on anger arousal. For example, for the adolescents who reported nonviolent and status offenses, status recognition was associated with global procedural fairness and personal respect was associated with anger arousal. Similar, yet contradictory results were revealed for the other groups. One possible explanation for these findings is that perceptions of fairness and anger arousal are occurring at two separate points in time and therefore are impacted differently by the personal and familial respect variables.

In Studies One and Two, adolescents were asked to describe a recent conflict with their parents/guardians and to answer questions specific to that conflict. Exploring the findings of the present study necessitates the assumption that students did only consider the specific conflict in answering questions. Although the instructions ask them to do so, adolescents may have answered questions based on their conceptualization of their family's general practices of conflict resolution that have developed over a period of time. It is likely that adolescents' answers were based on both the specific conflict

scenario they described, as well as a pattern of treatment by their parents that has accumulated over time.

The results suggested that for most of the adolescents, personal respect was more closely tied to global procedural fairness, while status recognition was more closely associated with anger arousal. This contrast in results could be due to the adolescent forming these perceptions at different points in time. It may be that adolescents who feel they are treated unfairly initially, or in a specific situation, feel they are not valued as individuals. The adolescent may make the assumption that they “must not be important.” However, over time, if adolescents continue to feel they are receiving poor treatment within the family, they may perceive their parents do not value them as family members. The adolescent may begin to believe “my parent keeps treating me unfairly, I must not be important to this family.” These beliefs, in turn might fuel angry feelings.

The present study’s cross-sectional survey design cannot assess these issues. There is no way to determine if the adolescents completely focused on the conflict scenario they reported. Longitudinal designs, especially those including interviews, observations of family conflict resolution procedures, and qualitative analyses, may provide a better framework for determining any time effects on the adolescents’ perceptions. These designs might also allow the determination of any cumulative effects that occur to change these perceptions and the impact these effects have on anger arousal.

The second interesting aspect of the results was that the pattern, for both the regression and mediational analyses, appeared to differ across the offense-type groups. This finding suggests some aspect of offense type contributes to whether the adolescent focuses more on issues of personal respect or on issues of status recognition in

judgements regarding fairness and feelings of anger and irritability. The results indicated that in some respects, the entire sample of adolescents, those in the no offense group, and those in the violent offense group appeared to be responding similarly, and in contrast to those adolescents in the nonviolent and status offense group.

It is likely that the similarity in results between the entire sample and the group of adolescents who reported never engaging in deviant behavior was due to extensive overlap between these two samples (the nonoffending group made up approximately three-fourths of the entire sample). Theories of the causes and types of delinquency associated with adolescent offending may provide some guidance with regard to explaining the contrasting results revealed when comparing the nonoffending adolescents with those reporting nonviolent and status offenses. Moffitt (1993) describes two trajectories of delinquent behavior. The first is referred to as life-course persistent. These adolescents begin engaging in deviant and aggressive behaviors at earlier ages and tend to continue their offending throughout adolescence and into adulthood.

The second, and much larger, group of adolescents Moffitt (1993) refers to as adolescent-limited. These adolescents only begin engaging in deviant behavior during adolescence and desist before moving into adulthood. Moffitt believes that adolescent-limited deviant behavior is so common that it is normative for adolescence. Moffitt posits that these adolescent-limited offenders engage in deviant behavior to assert their independence and feel a greater sense of maturity. Moffitt suggests the adolescent-limited group views their peers who have already developed deviant behavior (the life-course persistent group) as having greater status, privilege, and power associated

with their deviant lifestyle. The adolescent-limited group then begins mimicking these behaviors.

Moffitt's (1993) theory, that adolescents' engage in deviant behavior out of desire for power and to be viewed as independent, may help explain the differences revealed across the nonoffending and nonviolent adolescents in Study Two. Those adolescents who engage in nonviolent offenses are also likely to be more involved with their peers. Research has established that delinquent behavior is likely to occur within groups and that one risk factor for delinquent behavior is the presence of deviant peers (e.g., Ary et al., 1999; Lahey, Waldmann, & McBurnett, 1999; Sedylitz & Jenkins, 1998). Research has also shown that as children move through adolescence, peer relationships begin to rival familial relationships, in terms of the importance they have in, and the impact they have on, the adolescents' lives as they attempt to individuate from their families.

The adolescents who reported nonviolent and status offenses in Study Two may have moved further into the stage in which peers are seen as having greater value and may be asserting their independence from their family, while becoming more invested with their peer groups. This would contribute to their deviant behavior and may also affect their perceptions of family conflict resolution procedures. The adolescents who reported they engage in nonviolent and status offenses may be attempting to assert their independence from their parents and wish to have status equal to their parents within the family. This could impact their desire to be seen as important members within the family by their parents. This expectation might explain why there is a stronger relationship between perceptions of status recognition and overall fairness for these adolescents. At the same time, these adolescents are also striving to stand on their own and therefore be

seen as important individuals. This could also explain the relationship between personal respect and anger arousal for this group.

Another possible explanation for the greater focus of most adolescents on status recognition with regard to anger arousal, as well as the different pattern of results for the nonviolent offending group, is the concept of identity orientation. Hypothesis 4 predicted that an adolescent's identity orientation, whether individual or collective, impacts whether the adolescent is more focused on personal respect or status recognition. The measure of identity orientation was not included in Study Two, and the results of the analyses for Hypothesis 4 in Study One were inconclusive. However, these results did suggest identity orientation moderated the relationship between perceptions of status recognition and deviant behavior. Also, a covariance was included in the structural equation models for Hypothesis 3 partly due to the presumption that identity orientation might account for the shared variance of personal respect and status recognition. If identity orientation does play a role in these relationships, a possible explanation for the finding that the nonoffending adolescents are more focused on status recognition is that these adolescents are more focused on collective identity. The finding that personal respect was more strongly associated with anger arousal for the nonviolent offenders would suggest a greater focus on personal identity by these adolescents. The differences in identity orientation may also be associated with the nonviolent offenders' attempts to be more independent and mature.

Little research has been conducted on the concept of identity orientation within the family. It is likely, however, that younger children are more focused on collective identity, in that their status within the family, as well as other sociological and communal

aspects of identity, would be more important to their self-concept. It could be that as children enter and move through adolescence they become more focused on individual aspects of identity, including seeing themselves as individuals, with their own unique qualities and characteristics. According to Moffitt, many adolescents engage in deviant behavior to accelerate the process of growing up and separating themselves from their parents. Their involvement in deviant behavior may assist in the transition to a focus on individual identity from a collective identity orientation. Including measures of identity orientation in future studies, which differentiate adolescents with regard to deviant behavior, would assess whether identity orientation may be playing a role in the adolescents' perceptions of the family conflict resolution procedures.

The results of the present study suggest a method for improving adolescents' perceptions of fairness of family conflict resolution procedures and decreasing conflict within the family. Findings of the present study showed adolescent perceptions of the methods used to resolve family conflict were associated with judgements about the level of conflict and cohesion within the family, feelings of anger and irritability, and deviant behavior. These findings suggest that parents who utilize conflict-resolution procedures that are perceived as fair by the adolescent may decrease their child's angry feelings and deviant behavior. The findings from Hypothesis 3 suggest that parents should make diligent efforts to express to their children that they value and respect them both as important members of the family and important individuals (independent of their status within the family). The results also suggest that for adolescents who are engaging in nonviolent offenses, parents' expression of respect for their child as an individual may be

even more likely to decrease or prevent angry feelings (as compared with expressions of respecting the child as a family member).

Identity Orientation

The fourth goal of the present study was to incorporate identity orientation into Fondacaro and colleagues' working model of the relationships among facets of procedural justice, anger arousal, and deviant behavior. Cheek and colleagues (Cheek, 1982/83; Cheek & Briggs, 1994; Cheek, Trop, Chen, & Underwood, 1994) conceptualized two identity orientations believed to be relevant to the present theory: personal identity orientation and collective identity orientation. Personal identity orientation is a focus on private ideas about selfhood and subjective feelings of uniqueness and continuity, while collective identity orientation focuses on sociological variables and feelings of commitment to one's community.

For the present study, Hypothesis 4 predicted an adolescent's predominant identity orientation, whether personal or collective, would dictate which of the two paths to anger and deviant behavior (either perceptions of low personal respect or low status recognition) was more salient for the adolescent. Study One tested whether identity orientation moderated the relationships between personal respect/status recognition and anger arousal/deviant behavior. The hypothesis predicted that adolescents who focus more on personal identity and perceive their parents do not respect them as individuals would experience increased anger arousal and deviant behavior. For adolescents who are more focused on collective identity, perceptions of being devalued as a family member would lead to higher levels of anger arousal and deviant behavior.

Study One revealed collective identity did moderate the relationships between delinquency/drug use and perceptions of being respected as a family member. However,

these findings were not in the predicted direction and suggested high collective identity was associated with lower levels of deviant behavior when adolescents perceived their parents did not respect them as family members.

The relationships focused on in Hypothesis 4 were assessed using ANCOVA analyses, which controlled for conflict severity, in Study One. Due to the small sample size of Study One, these results are considered exploratory. The analyses focusing on personal identity as a moderator were not significant. Moreover, the analyses testing collective identity as a moderator to the relationship between status recognition and anger arousal were nonsignificant. It is suspected that these nonsignificant results were due to the small sample size used in Study One. Unfortunately, the Aspects of Identity Questionnaire, which measures the identity orientation construct, was not included in Study Two, and the proposed relationships with identity orientation and the procedural justice indices could not be explored in Study Two. Future research should incorporate identity orientation to reassess these relationships and to attempt to establish relationships among these variables.

The two significant analyses for the moderation effect of collective identity focused on predicting delinquent behavior and drug use. The results revealed that for adolescents who described themselves as less focused on collective identity, higher levels of perceived familial disrespect were associated with higher levels of deviant behavior (including both delinquency and drug use). In contrast, for those adolescents who self-described as focusing a great deal on collective identity, higher perceptions of disrespect at the familial level were associated with lower levels of deviant behavior. It may be that these unexpected results are idiosyncratic to this small data set. Future

studies, which include larger sample sizes, are needed to further assess the relationships among these variables.

Voice, Global Procedural Fairness, and Deviant Behavior

The fifth goal of the present study was to replicate previous findings of a voice effect. Voice is another aspect of procedural justice, focusing on having the opportunity to provide input into the decision-making process prior to a decision being made. This is seen as a very important aspect of procedural justice. Voice has been positively associated with perceptions of overall fairness and negatively associated with deviant behavior and negative emotional response (e.g., Diamond et al., 2001; Fondacaro, Brank, Villeneuve-Abraham, Luescher, & McNatt, 2004). The results of the analyses of Study Two revealed a relationship between voice and lower levels of deviant behavior, as well as a mediating effect of voice on the relationship between global procedural fairness and deviant behavior. Differences in the mediational analyses were also revealed across the offense-type groups.

These relationships were assessed in both Study One and Study Two; however, the results for Study One were nonsignificant. In Study Two, the relationships were assessed utilizing regression techniques, which controlled for the effects of the demographic variables. The analyses of a mediating mechanism were also analyzed using SEM techniques. Similar to the analyses for Hypothesis 3, multiple versions of the structural equation models were tested. The models varied as to whether or not they were based on the hypothesized relationship among the variables or an alternative relationship. The hypothesized relationship was that voice mediated the relationship between global procedural fairness and deviant behavior. In the alternative set of models, global

procedural fairness was assessed as a mediator for the relationship between voice and deviant behavior.

Within these sets of models, two versions of the models were tested. The first version was a Partial Mediation Model and the second a Full Mediation Model. Fit indices were again used to assist in determining which of the two sets of structural equation models appeared to best fit the data. Differences in fit were only evident for the models for the nonviolent and violent offenders. Those values indicated the hypothesized models provided the better fit. This was the model in which perceptions of having input in the decision-making process partially or completely accounted for the relationship between perceptions of overall fairness and deviant behavior.

The results of the regression analyses focusing on the relationship between deviant behavior and voice revealed these variables were associated with one another for the entire sample and for each of the three groups based on offense type in Study Two. The regression mediation analyses for entire sample and the group of adolescents who reported never engaging in deviant behavior revealed having input in the decision-making process partially mediated the relationship between overall perceptions of unfairness and deviant behavior. The regression analyses of the mediation were nonsignificant for the nonviolent adolescents. Perceptions of having opportunity to provide input in the decision-making process and of the overall fairness of the conflict-resolution procedures were both associated with deviant behavior; however, perceptions of having input did not mediate the relationship between unfairness and deviant behavior. None of the demographic variables in the analyses for the nonviolent offenders appeared to provide a mediating function. The analyses for the group of

adolescents who reported engaging in violent offenses revealed that not having input completely accounted for the relationship between overall unfairness and deviant behavior.

The SEM analyses of the mediation of voice on the relationship between global procedural fairness and deviant behavior revealed that, for both the entire sample and for those who reported never engaging in deviant behavior, the Partial Mediation Model (in which voice partially accounted for the relationship between global procedural fairness and deviant behavior) fit the data best. For the nonviolent and violent offenders, the Full Mediation Model, in which voice completely accounted for deviant behavior, provided the best fit. It is unclear why the SEM analyses revealed a mediation effect for the nonviolent offenders when the regression analyses did not. Future studies will be needed to determine if voice does in fact provide a mediating effect on the relationship between global procedural fairness and deviant behavior for nonviolent adolescents.

The results for Hypothesis 5 suggested that, similar to the mediation results for Hypothesis 3, the type of deviant behavior the adolescents reported engaging in impacted the nature of the effect of the mediator. The SEM analyses for Hypothesis 5 suggested having input in the decision-making process had a greater impact on deviant behavior for the nonviolent and violent offenders, as compared to those who reported no deviant behavior. These findings also seem consistent with the view that adolescents use deviant behavior as a method of asserting their independence. A desire to be listened to and consulted with in regard to decision-making within the family would be consistent with adolescents wishing to be perceived as mature and adult-like.

Much of the research on procedural justice conceptualizes voice as one aspect of this construct. This approach suggests that voice affects an outcome (in this case, deviant behavior) through perceptions of fairness overall, which suggests global procedural fairness as the mediator. The findings of the regression and SEM analyses, in Study Two showed the opposite effect, in which voice mediated the relationship between global procedural fairness and deviant behavior. This finding suggests that perceptions of fairness are filtered through the concept of having voice; however, the order of these perceptions seems unlikely. It may be, however, that voice impacts perceptions of fairness as a moderator, rather than a mediator. It might be that when adolescents perceive their parents have treated them fairly, they are unconcerned with whether or not they had the opportunity to provide input. In contrast, when adolescents view their parents' behavior as unfair, they attempt to determine what may have contributed to this unfairness and focus on whether or not they had the opportunity to provide input before the decision was made.

Post-hoc analyses for the data in Study Two suggested partial support for this explanation. Holmbeck (1997) described a regression method for testing for linear moderation effects. In this approach, an interaction term (calculated by the multiplicative product of the predictor and the moderator) is included in the regression equation. In Study Two, the product of multiplying the Voice and one-item Global Procedural Fairness scale scores was the interaction term. Voice and GPF were entered in the first step of a hierarchical regression, followed by the interaction term on the second step. This was tested for the entire sample and the three subgroups. The interaction term was significant in the analyses for the entire sample and the group of nonoffending

adolescents, indicating a moderator effect. Future studies will be needed to further assess whether voice acts as a moderator or mediator, and whether there is any difference in its effect across the offense-type groups.

Although the results of the present study do not definitively determine the mechanisms of the effect of voice on deviant behavior, they do reveal that there is a relationship. The findings suggest that parents may improve their children's perceptions of the fairness of family decision procedures and possibly decrease deviant behavior by allowing adolescents the opportunity to present their version of the situation before the parents make a decision and apply any consequences to the adolescents.

Differences in Procedural Justice Indices across Offense Groups

The sixth and final goal of the present study was to make comparisons on specific aspects of the procedural justice construct (including personal respect, status recognition, and voice), across the groups based on the type of deviant behavior in which the adolescent reported engaging. The original goal of the present study was to compare system-involved and non-system-involved adolescents on these aspects of procedural justice. Due to recruitment difficulties with regard to system-involved adolescents in Study One, this comparison was not possible. In Study Two, adolescents were divided into three groups based on offense type (i.e., no offense, nonviolent and/or status offense only, and violent offense). These three groups were compared on the three specific aspects of procedural justice.

Hypothesis 6 predicted that lower levels of deviant behavior would be associated with higher levels of perceived personal respect, status recognition, and voice. The findings for Study Two were consistent with this hypothesis for all three procedural justice constructs. These relationships were assessed via a MANCOVA that controlled

for age, ethnicity, grade, grades in school, and state. The results showed adolescents in the No Offense group reported the highest scores on these constructs, followed by adolescents who report engaging in nonviolent and status offenses. Adolescents who reported engaging in violent offenses reported the lowest scores on these constructs.

The results of Hypothesis 6 were consistent with previous research on the impact of parenting styles on deviant behavior. Montemayor (1986) reported that deficits in parenting skills (including monitoring, effective discipline, and reinforcement of positive behavior) increase coercive interactions between parents and adolescents, which, in turn, are associated with increased aggressiveness and rule-breaking behaviors by the adolescent. Patterson (1982) found that more coercive parenting styles were associated with increased deviant behavior. Baumrind (1971) also described parenting styles (authoritarian, authoritative, and permissive) associated with adolescent behavior. Patterson's coercive and Baumrind's authoritarian parenting styles are least likely to incorporate aspects of procedural justice in family decision-making, including personal respect, status recognition, and voice.

In the authoritarian style, parents are unlikely to provide the adolescent input into the family decision-making process. These parents make and set rules for the family, which are to be followed by family members without question. The coercive parenting style is often associated with inconsistent parenting. These parents frequently do not monitor their children and may not always enforce family rules. However, at times they then harshly and without explanation enforce rules. Punishment may also be excessive in these families. This inconsistent style would also decrease the adolescent's ability to have input in the family decision-making process.

Both Baumrind (1971) and Patterson's (1982) parenting styles appear to consider the importance of the child having input into the decision-making process (i.e., voice). The findings of the present study suggest additional constructs for parents to consider when resolving conflict with their adolescents, including personal respect and status recognition. Although, Study Two was not longitudinal and causation cannot be inferred, the results do suggest parenting practices that may increase adolescents' perceptions of the family dispute resolution procedures as fair. Perceptions of fair conflict-resolution procedures may then decrease angry and other negative feelings, as well as deviant behavior. It is recommended that parents allow adolescents to share their opinions and beliefs about the nature of the conflict and the possible consequences for their behavior. Parents should also utilize language and procedures that indicate they respect and value their child, both as an individual and as a family member. This is likely to be especially important in conflicts that involve multiple children. These approaches will likely improve communication within the family and decrease overall family conflict.

Implications

The results of the present study indicate that adolescents' perceptions of their parents' treatment during family conflict resolution are related to adolescent affective states and behaviors. Possible interventions for decreasing adolescent anger and deviant behavior would include those that reduce actual or perceived unfairness in the process of resolving family conflict. Parents and adolescents could be taught, through both parent-training and family therapy, conflict-resolution strategies that are consistent with aspects of procedural fairness. These would include strategies that allow all parties the opportunity to provide input in decision-making processes, as well as being able to safely provide feedback about feelings regarding conflict outcomes. Family conflict resolution

strategies should also increase the self-worth of all family members by communicating that family members are both important and valued individuals and members of the family. Parents and adolescents could be taught communication skills that allow discussion of individual feelings and beliefs without derogating other family members.

Limitations and Future Directions

The first limitation to the present study was the inability to recruit an adequate sample of system-involved adolescents. Difficulties with recruitment, specifically adolescents' refusal to take home and return parental informed consent forms, were a major roadblock to the present study. It is recommended that future studies include system-involved adolescents and make comparisons with non-system-involved adolescents on aspects of procedural justice. To accomplish this goal, it will be necessary to establish a very close relationship with the juvenile court. A great deal of effort and planning will need to be put into helping juvenile court personnel to understand the importance and value of the research, to increase their involvement and stake in the research. Investment by juvenile court personnel would likely increase their efforts to actively encourage adolescents to participate. Non-coercive, appropriate reinforcement and compensation for the adolescents should also be explored to obtain a large enough sample size to successfully assess the complex relationships among the variables of interest.

The small sample size in Study One was the second limitation to the present study. Many of the nonsignificant findings in Study One may be due to the small sample size; there may have been insufficient power to detect significant results. The small sample did not allow for a complete test of the impact of identity orientation on the other variables of interest in Study One. It is recommended that future studies focus on the possible

contribution identity orientation may have on understanding the relationship between family functioning and deviant behavior.

A third limitation of the present study is the general measure of anger and irritability used as a proxy measure of anger arousal in Study Two. Study One used an item measuring the adolescents' anger as a specific response to the self-reported conflict with their parents. This more specific measure allowed for the measurement of anger as a response to perceived fairness or unfairness, rather than the measurement of anger as a typical affective style of the adolescent. The Massachusetts Youth Screening Instrument, Second Version (MAYSI-2) measure of anger and irritability provided a more static and global measure of the adolescent's level of these negative emotions over the course of the last few months. The use of this measure did not allow the assertion that angry feelings were due to the parents' actions during the course of conflict resolution, based on the results of Study Two. Futures studies that utilize different measures of anger arousal may reveal different results from those found here.

It is possible that adolescents who are not typically angry were angered by their parents' treatment during the course of the specific conflict they reported in Study Two. For these adolescents, their level of anger arousal based on perceived unfairness would be underestimated by the MAYSI. It could also be that adolescents who feel angry and irritable on a frequent basis were not angered by their parents' treatment on the specified occasion. For these adolescents, the relationship between their perceptions of fairness and anger in response to those perceptions would be overestimated. It is recommended that future research include, at a minimum, an assessment of adolescents' feelings of anger in response to their perceptions of treatment by their parents.

Longitudinal research could also assist with clarification of these issues and could provide better understanding of the specific nature of the relationship between perceptions of unfairness and anger. Specifically, longitudinal studies would allow measurement of anger after the conflict situation, as well as for a time period extending beyond the conflict situation, to assess the endurance of angry feelings. It is also recommended that future longitudinal studies be conducted in which the data is collected in years prior to the child entering adolescence, as well as during adolescence. This type of study would facilitate the determination of two issues. First, whether participants experience increased anger in response to increases in family conflict as the children enter and move through adolescence. Second, whether anger, in response to family conflict, is associated with current and future deviant behavior.

Another methodological concern of the present study relates to the deviant behavior measure. It should be noted that although there was enough variability in the Study Two sample on the Self-Report Delinquency Scale (SRDS) to divide the adolescents into three groups, most of the adolescents' SRDS total scores were on the lower end of the scale. SRDS total scores range from 1 to 5 for adolescent deviant behavior within the last year, with scores of 1 corresponding to *Never*, scores of 3 corresponding to *Sometimes*, and scores of five corresponding to *Often*. For the entire sample in Study Two, total scores ranged from 1.00 to 5.00; however 95% of the scores were less than 3.00.

For the adolescents who reported engaging in violent offenses, there was greater variability in scores, with 68% of scores below 3.00 and 22% of scores between 3.00 and 4.00. However, overall the number of adolescents who reported engaging in deviant behavior in the range of *Sometimes* to *Often* was small. The results of the present study

need to be replicated in samples of adolescents who report higher levels of deviant behavior to determine if the relationships among aspects of procedural justice and deviant behavior are the same at the higher level of deviant behavior (both for adolescents who are and are not involved in the juvenile justice system).

A number of findings from the present study will need to be replicated in future research. One of these pertains to the pattern of results revealed for Hypothesis 3 across the three offense-type groups. The impact of identity orientation and Moffitt's theory of the causes of adolescent-limited deviant behavior were used to explain the differences between the nonoffending adolescents and nonviolent offenders in Study Two. However, neither of these explanations accounts for the finding that the violent offenders' responses were more similar to the nonoffending group than those of the nonviolent offenders. If this finding is replicated in future studies, aspects specific to nonviolent and status offenders will need to be explored to determine what causes this group to respond differently from both nonoffenders and violent offenders.

The survey design of the present study does not allow a deeper analysis of the adolescents' understanding of or justifications for their offending and how perceptions of family conflict resolution procedures impact their offending. This information would allow a determination of whether the proffered explanation of the pattern of findings in Study Two is accurate. Future research that includes interview formats and qualitative analyses would provide better insight into the adolescents' understanding of their own experiences and perceptions within the family.

In the SEM analyses for Hypothesis 3 and 5, the hypothesized versions of the models, in which personal respect/status recognition and voice were the mediators, were

selected as the best fitting models for the data. However, the selection of these models was based on data-drive modifications to the Hypothesis 3 models (the inclusion of the covariances) and the fit indices. Because group-specific models were used, each model was only tested with one sample of adolescents. In addition, the models in Study Two were also fairly simplistic, in that they only measured the effects of one or two aspects of procedural justice (personal respect and status recognition or voice). It is possible that these models will not generalize to other samples. Future studies will be needed to replicate the present results and validate the models. More complex models that take the multiple processes involved in procedural justice judgements into account, which may be occurring simultaneously or serially, will also be needed to fully understand the complex nature by which justice appraisals impact family functioning and adolescents' emotions and behaviors.

The present study, because of its cross-sectional nature, does not provide guidance with regard to theoretical, rather than data driven, tests of whether the hypothesized or alternative models in Hypotheses 3 provide the better fit to the data. Within the proposed theoretical framework for the relationships assessed by Hypothesis 3, both sets of models would be plausible. It may be that adolescents who perceive their parents' decision-making methods as unfair feel disrespected and therefore become angry. It is also possible that the adolescents initially perceive the conflict-resolution procedures as disrespectful, which contributes to their judgment that the process is unfair. This, in turn, may fuel feelings of anger. Future longitudinal studies that include SEM analyses, especially those that include observations of family conflict resolution practices and qualitative analyses, should provide a mechanism for more definitively testing whether

personal respect and status recognition truly play mediating roles. These future studies would provide more in-depth opportunities for explicating these constructs and determining the causal mechanisms involved.

Eventually, studies that include very large samples of adolescents, who vary as to involvement with the juvenile court and the degree to which they are involved in deviant behavior, will be needed to assess more complex structural equation models (that allow for simultaneous assessment of the various relationships approached individually in the present study). These models would include the family functioning variables, identity orientation, various aspects of procedural justice (including an overall measure, personal respect, status recognition, and voice), anger arousal, and deviant behavior. Here too, interview and qualitative approaches may facilitate distinguishing the effects of the different aspects of procedural justice. It may also be beneficial to include measures of the degree to which adolescents are invested in their peer groups and assessments of their sense of their own maturity and degree of individuation from their parents. Measurements of these constructs would assist in determining if they act as an impetus for engaging in deviant behavior and account for the offense-type group differences seen in the present study.

The present study and most other studies focusing on procedural justice within the family context have relied on adolescent self-report of the family conflict resolution process. Future studies that supplement adolescent perspectives with parental perspectives and observations of actual conflict resolution procedures should allow further understanding of family conflict from a procedural justice perspective. This, in turn, will allow for better intervention strategies to increase procedurally just family

conflict resolution procedures, decrease negative feelings by family members related to conflict resolution procedures, and decrease adolescent deviant behavior.

APPENDIX A
PARENTAL INFORMED CONSENT AND PARTICIPANT ASSENT FORM

RESEARCH CONSENT FORM FOR PARENTAL/GUARDIAN
INFORMED CONSENT
ASSENT STATEMENT
*ADOLESCENT PERSPECTIVES ON PROCEDURAL JUSTICE
IN RESOLVING FAMILY CONFLICT*

Principal Investigator Michael P. Carey, Ph.D.
Co-Investigator(s) Jennifer Luescher, M.S.
Phone number(s) 419-383-3815; 419-392-7604

What you should know about this research study:

- We give you this consent form so that you may read about the purpose, risks, and benefits of this research study. All information in this form will be communicated to you verbally by the research staff as well.
- The main goal of research studies is to gain knowledge that may help future children.
- We cannot promise that this research will benefit your child. Just like regular care, this research can have side effects that can be serious or minor.
- You have the right to refuse to allow your child to take part, or agree for your child to take part now and change your mind later.
- Whatever you decide, it will not affect your child's regular care, relationship with your child's school or any other institution.
- Please review this consent form carefully. Ask any questions before you make a decision.
- Your choice to allow your child to participate is voluntary.

PURPOSE

You are being asked to allow your child to participate in a research study of family conflict. The purpose of the study is to assess children's beliefs about fairness during family conflicts. Your child was selected as a possible participant in this study because he or she is a seventh or eighth grade student. He or she is also a student in a regular classroom at a Lucas County School or has had some contact with the Juvenile Justice System. This study will involve two hundred seventh and eighth grade students.

PROCEDURES AND DURATION

If you decide to allow your child to participate, your child will fill out several questionnaires. Your child's name or other identifying information will not be asked nor will it be collected. The questionnaires will be distributed and collected by a member of the study team. In this way, your child's anonymity will be protected and school and/or justice personnel will not see your child's responses. Your child will describe a conflict that occurred with his or her parent(s). Your child will then answer questions about that conflict. Questions will also be asked about how students feel about themselves, what is important to them, and if they have engaged in any deviant behaviors. Your child will complete the questionnaire once. It should take forty-five to sixty minutes.

RISKS AND DISCOMFORTS

There are no known risks to participating in this study.

BENEFITS AND/OR COMPENSATION

There are no known immediate benefits to your child for participating in this study. This research may help other families in the future by better understanding the impact of family conflict on the family and the adolescents.

Children who return completed consent forms for this study will either receive a pizza party or gift certificates for pizza after completing the questionnaire.

ALTERNATIVE PROCEDURES OR TREATMENTS

Students recruited through schools who do not participate in this study will be given an alternative activity determined by school personnel.

CONFIDENTIALITY

By agreeing to have your child take part in this research study, you give to the Medical College of Ohio, the Principal Investigator and all personnel associated with this research study your permission to use or disclose personal information that can be identified with you or your child that we obtain in connection with this study. We will use this information for the purpose of conducting the research study as described in the research consent form.

The information that we will use or disclose includes your child completing a survey including information on a conflict your child had with his or her parent(s) or guardian(s) and how your child feels about that conflict, how your child feels about him or herself, what is important to your child, and if your child has engaged in any deviant behaviors. We may use this information ourselves for the purpose of research as part of the research study. Under some circumstances, the Institutional Review Board and Research and Grants Administration of the Medical College of Ohio may review your information for compliance audits.

The Medical College of Ohio is required by law to protect the privacy of your child's personal information, and to use or disclose the information we obtain about your child in connection with this research study only as authorized by you in this form. There is a possibility that the information we disclose may be re-disclosed by the persons we give it to, and no longer protected. However, we will encourage any person who receives your information from us to continue to protect and not re-disclose the information.

Your permission for us to use or disclose your child's personal information as described in this section is voluntary. However, your child will not be allowed to participate in the research

study unless you give us your permission to use or disclose your child's personal information by signing this document.

You have the right to revoke (cancel) the permission you have given to us to use or disclose your child's personal information at any time by giving written notice to Dr. Michael P. Carey, Ph.D. However, a cancellation will not apply if we have acted with your permission, for example, information that already has been used or disclosed prior to the cancellation. Also, a cancellation will not prevent us from continuing to use and disclose information that was obtained prior to the cancellation as necessary to maintain the integrity of the research study.

Except as noted in the above paragraph, your permission for us to use and disclose your child's personal information has no expiration date.

A more complete statement of Medical College of Ohio's Privacy Practices are set forth in its Joint Notice of Privacy Practice. If you have not already received this Notice, a member of the research team will provide this to you. If you have any further questions concerning privacy, you may contact the person identified in the Notice.

If you indicate your willingness for your child to participate in this study by signing this document, your child will not be asked to identify him or herself on the questionnaire. No identifying information can or will be disclosed to any school or justice system official or anyone else. Under some circumstances, the Institutional Review Board and Research and Grants Administration of the Medical College of Ohio may need to review patient records for compliance audits.

COST TO YOU FOR TAKING PART IN THIS STUDY

All costs associated with this study will be the responsibility of the investigators. No costs will be the responsibility of the participants.

IN THE EVENT OF A RESEARCH RELATED INJURY

In the event of injury resulting from your child's participation in this study, treatment can be obtained at the healthcare facility of your choice. You should understand that the costs of such treatment will be your responsibility. Financial compensation is not available. By signing this form you are not giving up any of your child's legal rights as a research subject.

In the event of injury, contact Dr. Michael P. Carey, Ph.D., Clinical Psychologist, by pager at 419-444-0359.

VOLUNTARY PARTICIPATION

Taking part in this study is voluntary. If you decide not to allow your child to participate in this study, your decision will not affect your or your child's future relations with the Medical College of Ohio, its personnel, and associated hospitals, schools, or juvenile court system. If you decide to allow your child to participate, you and your child are free to withdraw your consent and assent and discontinue participation at any time without penalty.

OFFER TO ANSWER QUESTIONS

Before you sign this form, please ask any questions on any aspect of this study That is unclear to you. You may take as much time as necessary to think it over. If you have any Questions concerning this study or consent form please contact Jennifer Luescher, M.S. at 419-392-7604 or Dr. Michael P. Carey, Ph.D. at 419-383-3815.

AUTHORIZATION

YOU ARE MAKING A DECISION WHETHER OR NOT TO ALLOW YOUR CHILD TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE, HAVE HAD ALL YOUR QUESTIONS ANSWERED, AND HAVE DECIDED TO ALLOW YOUR CHILD TO PARTICIPATE.

BY SIGNING THIS DOCUMENT YOU AUTHORIZE US TO USE OR DISCLOSE YOUR CHILD'S PERSONAL INFORMATION AS DESCRIBED IN THIS FORM.

The date you sign this document to enroll in this study, that is, today's date, MUST fall between the dates indicated on the approval stamp affixed to the bottom of each page. These dates indicate that this form is valid When you enroll in the study but do not reflect How long you may participate in the study. Each page of this Informed Consent Form is Stamped to indicate the form's validity as approved by the MCO Institutional Review Board (IRB).

Name of Subject (please print)

Signature of Subject or Legally Authorized Representative

Date

Relationship to Subject

Time a.m.
 p.m.

Name of Person Obtaining
Informed Consent (please print)

Signature of Person Obtaining Informed Consent
(as required by ICH guidelines)

Signature of Witness to Consent Process
(as required by ICH guidelines)

YOU WILL BE GIVEN A SIGNED COPY OF THIS FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the investigator, including questions about the research, your rights as a research subject or research-related injuries, please feel free to contact R. Douglas Wilkerson, Ph.D.; Associate Vice President for Research; Medical College of Ohio at (419) 383-4251.

ASSENT STATEMENT

My participation in this research study is voluntary. I have read and understood the above information, asked any questions which I may have and have agreed to participate. I will be given a signed copy of this form to keep.

Name of Subject

Signature of Subject

APPENDIX B
MEASURES

Demographic Sheet

Please circle or mark one response for each of the following questions:

1. Gender: Female Male

2. Grade: 7 8 9 10 11 12

3. School attending: _____

4. Please indicate your age in years: _____

5. Ethnic origin:

African-American Asian-American European-American

Hispanic-American Native American

Bi-racial (please list) _____

Other (please list) _____

6. Marital status of your biological parents:

Married

Widowed

Divorced

Separated

Never married

7. How far did your father (or guardian) go in school?

Less than 7th grade ____

9th grade or less

Some high school ____

Finished high school ____

Some college or other schooling after high school ____

Finished college ____

Graduate or professional school (for example, doctor or lawyer) ____

Don't know ____

8. How far did your mother (or guardian) go in school?

Less than 7th grade ____

9th grade or less ____

Some high school ____

Finished high school ____

Some college or other schooling after high school ____

Finished college ____

Graduate or professional school (for example, doctor or lawyer) ____

Don't know ____

9. If your father (or guardian) works, please write what he does for his job.

10. If your mother (or guardian) works, please write what she does for a job.

11. Who are you living with? Circle all that apply

Biological mother Adoptive mother Stepmother

Biological father Adoptive father Stepfather

Siblings, if so, number of siblings _____

Other (please list) _____

12. Have you ever been arrested? Yes ____ No ____

If so, how many times? _____

How long ago was the last time? _____

13. Have you ever spent the night in a juvenile detention center? Yes ____ No ____

If so, how many times? _____

How long ago was the last time? _____

14. Have you ever been adjudicated delinquent or found guilty of a crime?

Yes ____ No ____

If so, how many times? _____

How long ago was the last time? _____

Family Decision Making Questionnaire

Please think about an important conflict or disagreement you have had with one or both of your parents or guardians over the last twelve months (for example, about helping around the house, cleaning your room, homework, low grades, etc). Briefly describe the situation in the space provided below. If you have not had an important conflict situation with one or both of your parents or guardians over the last 12 months, list any situation involving a dispute or disagreement with your parents or guardians where a decision was made that affects you or others.

Write down a few words to describe the situation.

Section A

Please answer the following questions about the conflict situation you have listed.

1. Who were the adults involved in the situation? Circle all that apply

Mother

Stepmother

Father

Stepfather

Female guardian

Male guardian

Grandmother Grandfather

Other (please list) _____

2. Did one or more of your siblings get involved in the situation? Yes ___ No ___
3. When did the conflict occur? month _____ year _____
4. Has this situation been resolved yet? Yes ___ No ___
5. If yes, how long did it take to resolve the situation? _____

Section B

The purpose of this section is to better understand the conflict or disagreement you just described. For the purposes of this section, the term "parent(s)" refers to your parent(s) and/or guardian(s). Read each item carefully.

For the following items, circle a number from (1) for Strongly Disagree to (5) Strongly Agree that best describes your level of agreement related to the situation you described.

Examples:

- | | Strongly
<u>Disagree</u> | | | | Strongly
<u>Agree</u> |
|--|-----------------------------|---|---|---|--------------------------|
| 1. Your parent(s) asked for your input before a decision was made..... | 1 | 2 | 3 | ④ | 5 |

4 – This student agreed but not strongly.

- | | | | | | |
|--|---|---|---|---|---|
| 2. Your parent(s) favored others over you..... | 1 | 2 | ③ | 4 | 5 |
|--|---|---|---|---|---|

3 – This student did not agree or disagree with this statement.
The student's feelings were either neutral or undecided.

Circle the number that most closely describes the conflict situation you specified.

- | | Strongly
<u>Disagree</u> | | | | Strongly
<u>Agree</u> |
|--|-----------------------------|---|---|---|--------------------------|
| 1. Your parent(s) showed a lot of kindness and understanding..... | 1 | 2 | 3 | 4 | 5 |
| 2. You had an opportunity to tell your side of the story..... | 1 | 2 | 3 | 4 | 5 |
| 3. Your parent(s) probably gave you less respect than they would have given to other family members..... | 1 | 2 | 3 | 4 | 5 |
| 4. Your parent(s) were truthful to you..... | 1 | 2 | 3 | 4 | 5 |
| 5. Your parent(s) treated you with respect..... | 1 | 2 | 3 | 4 | 5 |
| 6. Your parent(s) listened to you..... | 1 | 2 | 3 | 4 | 5 |
| 7. You were treated as a valued member of your family..... | 1 | 2 | 3 | 4 | 5 |

	Strongly <u>Disagree</u>				Strongly <u>Agree</u>
8. Your parent(s) handled the situation in a good and proper way.....	1	2	3	4	5
9. Your parent(s) cared about you as an individual.....	1	2	3	4	5
10. Your parent(s) did not pay attention to what you had to say.....	1	2	3	4	5
11. Your parent(s) treated you as if you were somebody really important.....	1	2	3	4	5
12. You trust the way your parent(s) handled the situation.....	1	2	3	4	5
13. Any wrong decisions in this situation could be easily corrected.....	1	2	3	4	5
14. Your parent(s) were equally fair to everyone involved.....	1	2	3	4	5
15. Your parent(s) treated you worse than others because of your personal characteristics (for example, age, gender, etc.).....	1	2	3	4	5
16. Overall, your parent(s) treated you fairly.....	1	2	3	4	5

Section C

Now, focus on the outcome of the situation you listed above. Read each item carefully. Circle the number that most closely describes the conflict situation you specified.

	Strongly <u>Disagree</u>				Strongly <u>Agree</u>
1. Overall, things turned out the way they should have.....	1	2	3	4	5
2. This situation turned out exactly how you hoped it would.....	1	2	3	4	5
3. You got the full amount of what you deserved in this situation.....	1	2	3	4	5

	Strongly <u>Disagree</u>				Strongly <u>Agree</u>
4. The outcome of this situation was very favorable for you.....	1	2	3	4	5
5. The outcome of this situation was very fair.....	1	2	3	4	5
6. You felt very satisfied with the final outcome.....	1	2	3	4	5

Section D

Now, focus again on your response to the situation you described above. Read each item carefully. Please circle the number that most closely matches your response to each item.

	Strongly <u>Disagree</u>				Strongly <u>Agree</u>
The way my parent(s) treated me indicated that they:					
1. respect me as a unique individual.....	1	2	3	4	5
2. respect me as a person.....	1	2	3	4	5
The way my parents treated me indicated that they saw me as being:					
3. a valued son/daughter.....	1	2	3	4	5
4. a valued member of the family.....	1	2	3	4	5
5. intelligent.....	1	2	3	4	5
6. competent.....	1	2	3	4	5
7. mature.....	1	2	3	4	5
8. responsible.....	1	2	3	4	5
9. conscientious.....	1	2	3	4	5
10. strong.....	1	2	3	4	5
11. powerful.....	1	2	3	4	5
12. stable.....	1	2	3	4	5

	Strongly <u>Disagree</u>			Strongly <u>Agree</u>
13. friendly.....	1	2	3	4 5
14. warm.....	1	2	3	4 5
It is important to me to be:				
15. respected as a unique individual.....	1	2	3	4 5
16. respected as a person.....	1	2	3	4 5
It is important to me to be perceived as being:				
17. a valued son/daughter.....	1	2	3	4 5
18. a valued member of the family.....	1	2	3	4 5
It is important to me to be perceived as being:				
19. intelligent.....	1	2	3	4 5
20. competent.....	1	2	3	4 5
21. mature.....	1	2	3	4 5
22. responsible.....	1	2	3	4 5
23. conscientious.....	1	2	3	4 5
24. strong.....	1	2	3	4 5
25. powerful.....	1	2	3	4 5
26. stable.....	1	2	3	4 5
27. friendly.....	1	2	3	4 5
28. warm.....	1	2	3	4 5
The way my parents treated me made me feel:				
29. better about myself as a person.....	1	2	3	4 5

	<u>Strongly Disagree</u>			<u>Strongly Agree</u>	
30. better about myself as a unique individual.....	1	2	3	4	5
31. more valued as a son/daughter.....	1	2	3	4	5
32. more valued as a member of the family...	1	2	3	4	5

The way my parents treated me made me feel:

33. worse about myself as a person.....	1	2	3	4	5
34. worse about myself as a unique individual.....	1	2	3	4	5
35. less valued as a son/daughter.....	1	2	3	4	5
36. less valued as a member of the family....	1	2	3	4	5

The way my parents treated me made me feel:

37. angry.....	1	2	3	4	5
38. sad.....	1	2	3	4	5
39. embarrassed.....	1	2	3	4	5
40. ashamed.....	1	2	3	4	5
41. depressed.....	1	2	3	4	5
42. pleased.....	1	2	3	4	5
43. proud.....	1	2	3	4	5

Family Environment Scale

There are 27 statements below. They are statements about families. You are to decide which of these statements are true of your family and which are false. If you think the statement is *True* or mostly *True* of your family, circle the T next to the statement. If you think the statement is *False* or mostly *False* of your family, circle the F next to the statement.

You may feel that some of the statements are true for some family members and false for others. Circle T if the statement is true for most members. If members are evenly divided, decide what is the stronger overall impression and answer accordingly.

Remember we would like to know what your family seems like to you. So do not try to figure out how other members see your family, but do give us your general impression of your family for each statement.

- | | | |
|---|---|---|
| T | F | 1. Family members really help and support one another. |
| T | F | 2. Family members often keep their feelings to themselves. |
| T | F | 3. We fight a lot in our family. |
| T | F | 4. We often seem to be killing time at home. |
| T | F | 5. We say anything we want around home. |
| T | F | 6. Family members rarely become openly angry. |
| T | F | 7. We put a lot of energy into what we do at home. |
| T | F | 8. It's hard to "blow off steam" at home without upsetting somebody. |
| T | F | 9. Family members sometimes get so angry they throw things. |
| T | F | 10. There is a feeling of togetherness in our family. |
| T | F | 11. We tell each other about our personal problems. |
| T | F | 12. Family members hardly ever lose their tempers. |
| T | F | 13. We rarely volunteer when something has to be done at home. |
| T | F | 14. If we feel like doing something on the spur of the moment we often just pick up and go. |
| T | F | 15. Family members often criticized each other. |

- T F 16. Family members really back each other up.
- T F 17. Someone usually gets upset if you complain in our family.
- T F 18. Family members sometimes hit each other.
- T F 19. There is little group spirit in our family.
- T F 20. Money and paying bills is openly talked about in our family.
- T F 21. If there is a disagreement in our family, we try hard to smooth things over and keep the peace.
- T F 22. We really get along well with each other.
- T F 23. We are usually careful about what we say to each other.
- T F 24. Family members often try to one-up or out-do each other.
- T F 25. There is plenty of time and attention for everyone in our family.
- T F 26. There are a lot of spontaneous discussions on our family.
- T F 27. In our family, we believe you don't ever get anywhere by raising your voice.

Questions About the Kind of Person You Are

Please rate your behavior by circling the number that best describes you for each item. No statement will apply to you in every situation, but try to think about your usual behavior. Please answer quickly and honestly - there are no right or wrong answers.

- | | <u>Strongly
Disagree</u> | | | | <u>Strongly
Agree</u> |
|---|------------------------------|---|---|---|---------------------------|
| 1. I feel that nobody really cares about me the way I want them to..... | 1 | 2 | 3 | 4 | 5 |
| 2. No matter what I am doing, I usually have a good time..... | 1 | 2 | 3 | 4 | 5 |
| 3. There are times when I've felt unhappy or down about something..... | 1 | 2 | 3 | 4 | 5 |
| 4. I usually think of myself as a happy person..... | 1 | 2 | 3 | 4 | 5 |

	<u>Strongly Disagree</u>			<u>Strongly Agree</u>		
5. I sometimes get into such a bad mood that I feel like just sitting around and doing nothing.....	1	2	3	4	5	
6. I enjoy most of the things I do during the week.....	1	2	3	4	5	
7. I am the kind of person who has a lot of fun.....	1	2	3	4	5	
8. I sometimes feel lonely and sad.....	1	2	3	4	5	
9. I am the kind of person who smiles and laughs a lot.....	1	2	3	4	5	
10. I sometimes feel so down and unhappy that nothing makes me feel better.....	1	2	3	4	5	
11. I often feel a little sad or unhappy.....	1	2	3	4	5	
12. I sometimes feel like not trying anymore because I can't seem to make things better.....	1	2	3	4	5	
13. I usually have a great time when I do things with other people.....	1	2	3	4	5	
14. I almost always feel very happy.....	1	2	3	4	5	

Question About Your Grades in School

15. What grades did you get last year in school?

_____ Mostly A's	_____ Mostly C's
_____ Mostly A's and B's	_____ Mostly C's and D's
_____ Mostly B's	_____ Mostly D's
_____ Mostly B's and C's	_____ Mostly D's and F's

Aspects of Identity Questionnaire

Instructions: These items describe different aspects of identity. Please read each item carefully and consider how it applies to you. Please circle the number that most closely matches your response to each item.

1=Not Important to My Sense of Who I Am

2=Slightly Important to My Sense of Who I Am

3=Somewhat Important to My Sense of Who I Am

4=Very Important to My Sense of Who I Am

5=Extremely Important to My Sense of Who I Am

- | | | | | | |
|---|---|---|---|---|---|
| 1. The things I own, my possessions..... | 1 | 2 | 3 | 4 | 5 |
| 2. My personal values and moral standards..... | 1 | 2 | 3 | 4 | 5 |
| 3. My popularity with other people..... | 1 | 2 | 3 | 4 | 5 |
| 4. Being part of many generations
of my family..... | 1 | 2 | 3 | 4 | 5 |
| 5. My dreams and imagination..... | 1 | 2 | 3 | 4 | 5 |
| 6. The ways in which other people
react to what I say and do..... | 1 | 2 | 3 | 4 | 5 |
| 7. My race or ethnic background..... | 1 | 2 | 3 | 4 | 5 |
| 8. My personal goals and hopes for the future.... | 1 | 2 | 3 | 4 | 5 |
| 9. My physical appearance: my height,
my weight, and the shape of my body..... | 1 | 2 | 3 | 4 | 5 |
| 10. My religion..... | 1 | 2 | 3 | 4 | 5 |
| 11. My emotions and feelings..... | 1 | 2 | 3 | 4 | 5 |
| 12. My reputation, what others think of me..... | 1 | 2 | 3 | 4 | 5 |
| 13. Places where I have lived or where
I was raised..... | 1 | 2 | 3 | 4 | 5 |
| 14. My thoughts and ideas..... | 1 | 2 | 3 | 4 | 5 |
| 15. My attractiveness to other people..... | 1 | 2 | 3 | 4 | 5 |

1=Not Important to My Sense of Who I Am
 2=Slightly Important to My Sense of Who I Am
 3=Somewhat Important to My Sense of Who I Am
 4=Very Important to My Sense of Who I Am
 5=Extremely Important to My Sense of Who I Am

16. My age, belonging to my age group Or being part of my generation.....	1	2	3	4	5
17. The ways I deal with my fears and anxieties..	1	2	3	4	5
18. My role of being a student.....	1	2	3	4	5
19. My feeling of being a unique person, being distinct from others.....	1	2	3	4	5
20. My social class, the economic group I belong to whether lower, middle, or upper class.....	1	2	3	4	5
21. Knowing that I continue to be essentially the same inside even though life involves many external changes.....	1	2	3	4	5
22. My gestures and mannerisms, the impression I make on others.....	1	2	3	4	5
23. My feeling of belonging to the community....	1	2	3	4	5
24. My self-knowledge, my ideas about what kind of person I really am.....	1	2	3	4	5
25. My social behavior, such as the way I act when meeting people.....	1	2	3	4	5
26. My feeling of pride in my country, being proud to be a citizen.....	1	2	3	4	5
27. My physical abilities, being coordinated and good at athletic activities.....	1	2	3	4	5
28. My personal self-evaluation, the private opinion I have of myself.....	1	2	3	4	5
29. Being a sports fan, identifying with a sports team.....	1	2	3	4	5

- 1=Not Important to My Sense of Who I Am
 2=Slightly Important to My Sense of Who I Am
 3=Somewhat Important to My Sense of Who I Am
 4=Very Important to My Sense of Who I Am
 5=Extremely Important to My Sense of Who I Am

30. My occupational choice and career plans.....	1	2	3	4	5
31. My commitments of political issues or my political activities.....	1	2	3	4	5
32. My academic ability and performance, such as the grades I earn and comments I get from teachers.....	1	2	3	4	5
33. My language, such as my religious accent or dialect or second language that I know.....	1	2	3	4	5
34. My sex, being male or female.....	1	2	3	4	5

Questions About How You Feel About Yourself

Here are several statements about teenagers. Please circle the number following each statement depending on how true the statement is about you.

	<u>Not true for me</u>	<u>Sort of true for me</u>	<u>True for me</u>	<u>Really true for me</u>
1. Some teenagers feel that they are just as smart as others their age.....	1	2	3	4
2. Some teenagers find it hard to make friends.....	1	2	3	4
3. Some teenagers are often disappointed with themselves.....	1	2	3	4
4. Some teenagers are pretty slow in finishing their schoolwork.....	1	2	3	4
5. Some teenagers have lots of friends.....	1	2	3	4
6. Some teenagers don't like the way they are leading their life.....	1	2	3	4

	<u>Not true for me</u>	<u>Sort of true for me</u>	<u>True for me</u>	<u>Really true for me</u>
7. Some teenagers do very well at their classwork.....	1	2	3	4
8. Some teenagers are very hard to like.....	1	2	3	4
9. Some teenagers are happy with themselves most of the time.....	1	2	3	4
10. Some teenagers have trouble figuring out the answers in school....	1	2	3	4
11. Some teenagers are popular with others their age.....	1	2	3	4
12. Some teenagers like the kind of person they are.....	1	2	3	4
13. Some teenagers feel that they are pretty intelligent.....	1	2	3	4
14. Some teenagers feel that they are socially accepted.....	1	2	3	4
15. Some teenagers are very happy being the way they are.....	1	2	3	4

Questions About Thing You Have Done Lately

How many times in the last year have you:

	<u>Never</u>	<u>Seldom</u>	<u>Some- times</u>	<u>Fairly Often</u>	<u>Often</u>
16. Purposely damaged or destroyed property belonging to your parents or other family member?.....	1	2	3	4	5
17. Purposely damaged or destroyed property belonging to a school.....	1	2	3	4	5
18. Purposely damaged or destroyed other property that did not belong to you (not counting family or school property).....	1	2	3	4	5

	<u>Never</u>	<u>Seldom</u>	<u>Some- times</u>	<u>Fairly Often</u>	<u>Often</u>
19. Stolen (or tried to steal) a motor vehicle, such as a car or motorcycle.....	1	2	3	4	5
20. Stolen (or tried to steal) something worth greater than \$50.....	1	2	3	4	5
21. Knowingly bought, sold, or held stolen goods (or tried to do any of these things).....	1	2	3	4	5
22. Thrown objects (such as rocks, snowballs, or bottles) at cars or people.....	1	2	3	4	5
23. Run away from home.....	1	2	3	4	5
24. Lied about your age to gain entrance or to purchase something; for example, lying about your age to buy liquor or get into a movie.....	1	2	3	4	5
25. Carried a hidden weapon other than a plain pocket knife.....	1	2	3	4	5
26. Stolen (or tried to steal) things worth \$5 or less.....	1	2	3	4	5
27. Attacked someone with the idea of seriously hurting or killing him/her.....	1	2	3	4	5
28. Been paid for having sexual relations with someone.....	1	2	3	4	5
29. Been involved in gang fights.....	1	2	3	4	5
30. Sold marijuana and hashish ("weed" "pot" "crip").....	1	2	3	4	5
31. Cheated on school tests.....	1	2	3	4	5
32. Hitchhiked where it was illegal to do so.....	1	2	3	4	5

	<u>Never</u>	<u>Seldom</u>	<u>Some- times</u>	<u>Fairly Often</u>	<u>Often</u>
33. Stolen money or other things from your parents or other members of your family.....	1	2	3	4	5
34. Hit (or threatened to hit) a teacher or other adult at school.....	1	2	3	4	5
35. Hit (or threatened to hit) one of your parents.....	1	2	3	4	5
36. Hit (or threatened to hit) other students.....	1	2	3	4	5
37. Been loud, rowdy, or unruly in a public place (disorderly conduct).....	1	2	3	4	5
38. Sold hard drugs, such as heroin, cocaine, and LSD.....	1	2	3	4	5
39. Taken a vehicle for a ride (drive) without the owner's permission.....	1	2	3	4	5
40. Had (or tried to have) sexual relations with someone against their will.....	1	2	3	4	5
41. Used force (strong-arm methods) to get money or things from other students.....	1	2	3	4	5
42. Used force (strong-arm methods) to get money or things from a teacher or other adult at school.....	1	2	3	4	5
43. Used force (strong-arm methods) to get money or things from other people (not students or teachers).....	1	2	3	4	5
44. Avoided paying for such things as movies, bus or subway rides, and food.....	1	2	3	4	5
45. Been drunk in a public place.....	1	2	3	4	5

	<u>Never</u>	<u>Seldom</u>	<u>Some- times</u>	<u>Fairly Often</u>	<u>Often</u>
46. Stolen (or tried to steal) things worth between \$5 and \$50.....	1	2	3	4	5
47. Stolen (or tried to steal) something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book from the library.....	1	2	3	4	5
48. Broken into a building or vehicle (or tried to break in) to steal something or just look around.....	1	2	3	4	5
49. Begged for money or stolen something from strangers.....	1	2	3	4	5
50. Skipped class without an excuse.....	1	2	3	4	5
51. Failed to return extra change that a cashier gave you by mistake.....	1	2	3	4	5
52. Been suspended from school.....	1	2	3	4	5
53. Made obscene telephone calls, such as calling someone and saying dirty things.....	1	2	3	4	5
How often in the last year have you used:					
54. alcoholic beverages (beer, wine, and hard liquor).....	1	2	3	4	5
55. inhalants ("huffing" "whippits").....	1	2	3	4	5
56. marijuana – hashish ("weed" "pot" "crip").....	1	2	3	4	5
57. hallucinogens ("LSD" "acid" "shrooms").....	1	2	3	4	5
58. ecstasy ("X" "rolls" "beans").....	1	2	3	4	5
59. amphetamines ("speed" "crank").....	1	2	3	4	5

	<u>Never</u>	<u>Seldom</u>	<u>Some- times</u>	<u>Fairly Often</u>	<u>Often</u>
60. barbiturates ("pills" "downers").....	1	2	3	4	5
61. heroin ("horse" "smack" "china white").....	1	2	3	4	5
62. cocaine ("coke" "powder" "crack" "rock").....	1	2	3	4	5

Questions About How You Are Feeling Today

For the next set of questions, read each statement carefully and decide how you feel today. Then put an X in the space in front of the word or phrase that best describes how you are feeling TODAY.

- | | | | |
|-----------------|---------------------|----------------|--------------------|
| 61. I feel..... | _____ very calm | _____ calm | _____ not calm |
| 62. I feel..... | _____ very pleasant | _____ pleasant | _____ not pleasant |
| 63. I feel..... | _____ very relaxed | _____ relaxed | _____ not relaxed |
| 64. I feel..... | _____ very worried | _____ worried | _____ not worried |
| 65. I feel..... | _____ very happy | _____ happy | _____ not happy |
| 66. I feel..... | _____ very good | _____ good | _____ not good |
| 67. I feel..... | _____ very troubled | _____ troubled | _____ not trouble |
| 68. I feel..... | _____ very bothered | _____ bothered | _____ not bothered |
| 69. I feel..... | _____ very mixed-up | _____ mixed-up | _____ not mixed-up |
| 70. I feel..... | _____ very cheerful | _____ cheerful | _____ not cheerful |

Thank you very much for your help in our study. If you have any comments or suggestions about our survey, we would like to have them. Please write them on the back of this page.

APPENDIX C

INSTRUCTIONS FOR RATING CONFLICT SEVERITY

You are asked to place adolescent descriptions of family conflict into three categories: low, medium, and high. Definitions for these three levels are as follows:

Low level conflicts are those that appear to involve little disagreement (i.e., the adolescent does not describing any yelling, arguing, or physical violence/threat of physical violence) or little negative emotional response.

Many of conflicts also refer to only one specific situation (rather than a pattern of disagreements over an issue/particular type of conflict).

Medium level conflicts refer to yelling (verbal aggression), a feeling of being teamed up against (multiple individuals involved in the disagreement all “siding” against the adolescent), feelings of being unappreciated, disrespected, not listened to (or some other similar feeling), or negative feelings towards the individuals involved in the conflict that persist over time.

High level conflicts include physical violence or threats of physical violence.

Examples of the three levels are seen below.

Low

My mom wanted me to clean my room and I was mad.

My parents wanted be to stay home so we compromised and I only went out for a little while.

I don't like it when my parents won't let me watch T.V.

Cleaning my room

Medium

My dad yelled at me all day because I forgot to take the trash out.

My parents always take my brother's side in arguments.

My parents never care what I think about the kind of chores I should have to do.

My mom acts like I'm stupid when I don't do well in school.

High

My dad was mad because I didn't clean my room and he got in all in my face.

My mother said she was going to slap me because I was rude to her.

My father hit me after he found out I snuck out of the house.

My mother told my dad he should have hit me for disrespecting him.

Some conflicts may seem to fit two of these categories. Please use your best judgment and determine which category the conflict seems to fit into BEST. There do not have to be equal numbers of conflicts in the categories.

Please make three lists, each headed by the level of Conflict (i.e, Low, then list number 1, 2, 3, etc; Medium, 1, 2, 3., etc; High, 1, 2, 3, etc). Be sure that the ID number listed at the end of the adolescent's description remains at the end of the description on your three lists.

Thank you so much for you help with this!

List of Adolescents' Descriptions of Conflict Severity

1. I didn't want to do extra chores, so instead I split them up by negotiation with my parents. (ID 1)
2. I fought with my mom about not wanting to go see my sister in college, my dad got mad at me for being upset because I had special plans that weekend. It turned into everyone against me. (ID 2)
3. Helping around the house (ID 3)
4. I didn't put my clothes away when they asked (ID 4)
5. No important conflict situation has happened between my parents and me that I can recall from the past twelve months or really, ever. My mother and I got in a [semi] argument in the car on the way to my dance recital but I was a little cranky because I always stress out before a performance. (ID 5)
6. My parents are always giving me lectures and getting angry with me because of my grade in Spanish that doesn't even count for me. Also not cleaning my room and instead being online. (ID 6)
7. My mom wants me to clean the house and I refused, so I got in trouble. Me and my mom did not talk for four hours. (ID 7)
8. I had an argument with my real father because he feels I am too young to have a boyfriend when I have already had three before. (ID 8)
9. Both of my parents smoke and I strongly disagree with it. (ID 9)
10. My stepfather and I were yelled at for not helping clean up the house. (ID 10)
11. I was getting a low grade in my science class and my parents were disappointed. (ID 11)

12. I yelled at my mom because she made me clean my room when I didn't want to. (ID 12)

13. I wanted to go glow bowling but at first they said no. I described it then we agreed. (ID 13)

14. Getting another pet. (ID 14)

15. We fought over what show to watch tv (ID 16)

16. I had caught an attitude with my dad because I didn't move out of the way and he said he was going to slap me and I said "whatever." (ID 18)

17. Not giving permission for me to go with my cousin to a festival on house arrest, got in trouble, we got into an argument (ID19)

18. My mom wanted me to watch my brother and sister but I left the house. She yelled at me the entire day. (ID20)

19. My mother takes sides with my sister all the time, even if she is wrong. (ID21)

20. Not able to have friends over. (ID22)

21. I got in trouble and got it straighten out and my mom got all in my face and slapped me. (ID23)

22. Having to do a chore and I don't want to. Not being able to talk and tell my side of the story. (ID 24)

23. My mother tried to tell me I had to wash the dishes and it was not my day and she started yelling at me and I tried to tell her it as not my day. (ID 25)

APPENDIX D
PARENTAL INFORMED CONSENT FORM FOR DEPARTMENT OF EDUCATION
FUNDED RESEARCH PROJECT

Dear Parent:

A research team from the University of Florida is currently conducting a project at your child's school. The purpose of this letter is to explain the project and to ask your permission for us to include your child in the testing.

The goal of our project is to develop and to test a survey for middle-school students. The survey is intended to identify some of the important thoughts and concerns and characteristics of the present generation of middle-school students. We believe that the results will provide some new and valuable information about this age group for the educators and policy makers who shape children's school experiences. Your child's school is one of about 25 schools around the country at which we are administering the survey.

The survey will be given during regular school hours and will take about 50 minutes to complete. The questions will address a number of topics that are important in the lives of middle-school students. Some will ask students to reflect about themselves—what they feel especially satisfied or dissatisfied about, what their expectations are for the future. Others will ask about the child's relations with the important people in his or her life. Still others will ask about experiences at school, including possible worries or fears about bullying and school violence. In each case, we have worked hard to make the questions as clear as possible for students this age, and to try to ensure that none will be upsetting to the child.

An important point to note about the survey is that responses will be completely anonymous. Students will not put their names on the response forms, and there will be no information on the forms from which individual children could ever be identified. This means that no one will ever know how particular children responded—no one at your child's school, for example, and indeed none of us on the research team. Our interest is in general patterns of response and in possible variations across different groups (for example, boys compared with girls, or 6th graders compared with 8th graders). We have no need ever to know particular children's names.

The fact that responses are anonymous is something that we will explain carefully to the children. We want the children to feel free to answer honestly—and we want to be sure that no child is ever concerned that someone might know how he or she responded. Please indicate on the attached form whether you are willing to have your child participate in the survey. The form should be returned to the child's school. Children who

do not participate will be given an appropriate alternative activity by their teachers. There will be no negative consequences of any sort for children who do not participate.

In addition to asking your permission we will be asking your child's permission. Prior to administering the survey, the researcher will provide a general description of the questions to be asked and will emphasize that children are free to decide not to take part—either from the start or at any point after beginning the survey. Children will also be told that they do not have to answer any question that they do not wish to answer. Again, there will be no negative consequences for children who decide not to participate.

Our work is supported by grant from the Department of Education's Fund for the Improvement of Education program. This project has been approved by the University of Florida's Committee for the Protection of Human Subjects. It has also been approved by the principal of your child's school.

We hope that both you and your child will decide to help us with the project. Because of the safeguards we have described, we believe that there are no risks involved in participation. There also are no direct benefits for children who participate; we hope, however, that our results will provide valuable information about today's middle-school students, information that may eventually help to make the school experience a more rewarding one for all children. The greater the number of students who participate, the more accurate and helpful the results will be.

If you have any questions about the project, please call or e-mail Scott Miller at the number or address given below. Questions or concerns about your child's rights as a research participant may be directed to the UFIRB office, University of Florida, Box 112250, Gainesville, FL 32611, (352) 392-0433.

Scott A. Miller
Professor
Department of Psychology
University of Florida
Gainesville, FL 32611
352-392-0605, x 216 samiller@ufl.edu

University of Florida—Middle-School Survey

Child's name _____

Child's grade _____

I am willing to have my child participate in the project.

parent/guardian_____
2nd parent/witnessI do not wish to have my child participate in the project._____
parent/guardian_____
2nd parent/witness

APPENDIX E
ASSENT SCRIPT FOR DEPARTMENT OF EDUCATION FUNDED RESEARCH
PROJECT

National Middle-School Survey: School Violence and Beliefs About Self, Others, and the Future

Scott A. Miller

Assent Script for Middle-School Participants

We're from the University of Florida and we're doing a project at your school. The project is for students in middle school, and your principal and teachers have given us permission to do it at ____ School. We're hoping that you'll decide to help us out. The way you can help us out is by answering some questions about yourself—what you're like, how you feel or think about different things. The questions are on this survey [tester holds up copy], and you answer them on your own without anyone seeing your answers. We'll give out the survey here in a few minutes, and it should take about 40 or 50 minutes to finish.

We can't tell you in advance about all the questions on the survey, but we'll try to give you some idea of what they're like. Some of them are about things about yourself that you're happy or perhaps not so happy about—for example, what you feel you're good at and what you feel you're not so good at. Some of them are about your relations with other people—for example, how you feel about other kids, or about your teachers or parents. And some of them are about things that sometimes worry kids at school—for example, the problem of bullies or school violence. In each case, we just want to know what you honestly think.

There are several things that are very important to understand before we start. One is that you don't have to do this. You can decide not to do it before we even start. Or if you start and decide you don't want to do it that's OK too. Nothing bad will happen to you if you decide not to do the survey—for example, your teachers won't be mad or give you bad grades. If you decide not to do it [Here, we will describe whatever alternative activity the teachers have decided is appropriate for nonparticipants.] Another thing that's important is that you don't have to answer any question that you don't want to answer. If there's anything that you just don't want to think about or don't want to give an answer to you can leave it out. Now, if there's ever simply something that you don't understand you should raise your hand and ask us. We want you to skip a question only if you really don't want to answer it.

One last thing is very important. All the answers you give on the survey will be anonymous. This means that no one will ever know how you answered. Your teachers won't know, your parents won't know, and those of us doing the project won't know. We won't know because you won't put your name on the survey. Also, all the copies of the survey are the same, so no one can tell which one you got. Finally, when you're done you drop your survey in this box, and when we take them out later we'll have no way to know which one is yours. We set it up this way for a couple reasons. One is that what we're interested in finding out is how kids your age in general think—we don't need to know how any one particular kid thinks. The other is that we want you to feel free to answer honestly, because you know that no one will ever know how you answered.

One more thing. We hope that taking the survey will be an interesting experience, but apart from that there won't be any benefits for you—that is, there won't be any rewards or any changes because you filled out the survey. We've worked hard to try to be sure that there also won't be any risks—that is, no bad things that can happen.. But there's a chance that some kids might find some of the questions upsetting to think about, or might have some things that they want to talk about afterwards. Your counselors know this, and they'll be ready to talk to anyone who wants to talk. [Here, we will provide more specifics if the school desires—e.g., “Mrs. Smith will be in her office from 3 to 4 every day this week.”]

We hope all this is clear! Does anyone have any questions before we start? Remember, if you have questions when you're taking the survey just raise your hand and we'll try to answer them. And if you have any questions after you're done we'll be here to talk to you.

APPENDIX F
ITEMS USED TO CREATE THE VIOLENT OFFENSE SRDS SUBSCALE

How many times in the last year have you

- 22. Thrown objects (such as rocks, snowballs, or bottles) at cars or people
- 25. Carried a hidden weapon other than a plain pocket knife
- 27. Attacked someone with the idea of seriously hurting or killing him/her
- 29. Been involved in gang fights
- 34. Hit (or threatened to hit) a teacher or other adult at school
- 35. Hit (or threatened to hit) one of your parents
- 36. Hit (or threatened to hit) other students
- 41. Used force (strong-arm methods) to get money or things from other students
- 42. Used force (strong-arm methods) to get money or things from a teacher or other adult at school
- 43. Used force (strong-arm methods) to get money or things from other people (not students or teachers)

LIST OF REFERENCES

- Achenbach, T. M. (1991). *Integrative guide for the 1991 CBCL 4-18, YSR, and TRF profiles*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M., & Edelbrock, C. S. (1983). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington, VT: University of Vermont.
- Akaike, H. (1987). Factor analysis and AIC. *Psychometrika*, 52, 317-322.
- Arbuckle, J. L. (1997). *AMOS users guide: Version 3.6*. Chicago, IL: SmallWaters Corporation.
- Arbuckle, J. L. (2003). *AMOS (Student Version 5.0)[Computer software]*. Chicago, IL: SmallWaters Corporation.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16, 427-454.
- Arnett, J. J. (1999) Adolescent storm and stress, reconsidered. *American Psychologist*, 54, 317-326.
- Ary, D. V., Duncan, T. E., Duncan, S. C., & Hops, H. (1999). Adolescent problem behavior: The influence of parents and peers. *Behaviour Research and Therapy*, 37, 217-230.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph*, 4, 1-103.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness-of-fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Berzonsky, M. D. (1994). Self-identity: The relationship between process and content. *Journal of Research in Personality*, 28, 453-460.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen and J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Chan, D. W. (1985). The Chinese version of the General Health Questionnaire: Does language make a difference? *Psychological Medicine*, 15, 147-155.
- Cheek, J. M. (1982/83). *The Aspects of Identity Questionnaire: Revised scales assessing personal and social identity*. Unpublished manuscript, Wellesley College, Wellesley, MA.
- Cheek, J. M., & Briggs, S. R. (1982). Self-consciousness and aspects of identity. *Journal of Research in Personality*, 16, 401-408.
- Cheek, J. M., & Tropp, L. R. (1994). *The Aspects of Identity Questionnaire: History and bibliography*. Unpublished Manuscript, Wellesley College, Wellesley, MA.
- Cheek, J. M., Tropp, L. R., Chen, L. C., & Underwood, M. K. (1994, August). *Identity orientations: Personal, social, and collective aspects of identity*. Paper presented at the American Psychological Association Annual Meeting, Los Angeles.
- Cohen, B. H. (2001). *Explaining psychological statistics*. New York, NY: John Wiley & Sons, Inc.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Comstock, J. (1994). Parent-adolescent conflict: A developmental approach. *Western Journal of Communication*, 58, 263-282.
- Crumbaugh, J. C. (1968). Cross-validation of Purpose-in-Life Test based on Frankl's concepts. *Journal of Individual Psychology*, 24, 74-81.
- Cudeck, R. (1989). Analysis of correlation matrices using covariance structural models. *Psychological Bulletin*, 105, 317-327.
- Cudeck, R., & Browne, M. W. (1983). Cross-validation of covariance structures. *Multivariate Behavioral Research*, 18, 147-167.
- Daniels, D., & Moos, R. H. (1990). Assessing life stressors and social resources among adolescents: Applications to depressed youth. *Journal of Adolescent Research*, 5, 268-289.
- Deater-Deckard, K., & Dodge, K. A. (1997). Externalizing behavior problems and discipline revisited: Nonlinear effects and variation by culture, context, and gender. *Psychological Inquiry*, 8, 161-175.
- Deutsch, M. (1975). Equity, equality, and need: What determines which value will be used as the basis of distributive justice? *Journal of Social Issues*, 31, 137-149.

- Diamond, A. K. (2001). *Procedural and distributive justice in family decision-making: Reliability of the Family Justice Inventory-Youth Form*. Unpublished master's thesis, University of Florida, Gainesville, FL.
- Diamond, A. K., Luescher, J., & Fondacaro, M. (2000, March). *Procedural and distributive justice in family decision making: A psychosocial analysis of individual and family functioning in adolescents*. Poster session presented at the annual meeting of the American Psychology and Law Society, New Orleans, LA.
- Diener, E., Emmons, R. A., Larsen, R. J., Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49, 71-75.
- Dishion, T. J., French, D. C., & Patterson G. R. (1995). The development and ecology of antisocial behavior. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology, Volume 2: Risk, disorder, and adaptation* (pp. 421-471). New York, NY: John Wiley & Sons, Inc.
- Dornbusch, S., Carlsmith, J., Bushwall, S., Ritter, P., Leiderman, H., Hastorf, A., & Gross, R. (1985). Single parents, extended households, and the control of adolescents. *Child Development*, 57, 879-894.
- Ebata, A. T., & Moos, R. H. (1991). Coping and adjustment in distressed and healthy adolescents. *Journal of Applied Developmental Psychology*, 12, 33-54.
- Elliott, D. S. (1983). *National Youth Survey, Wave VI*. Ann Arbor, MI: Inter-university Consortium for Political and Social Research.
- Elliott, D. S. & Ageton, S. A. (1980). Reconciling race and class differences in self-reported and official estimates of delinquency. *American Sociological Review*, 45, 95-110.
- Elliott, D. S., Dunford, F. W., & Huizinga, D. (1987). The identification and prediction of career offenders utilizing self-reported and official data. In J. Burchard & S. Burchard (Eds.), *Prevention of delinquent behavior* (pp. 90-121). Thousand Oaks, CA: Sage.
- Elliott, D. S., Huizinga, D., & Menard, S. (1989). *Multiple problem youth: Delinquency, substance use, and mental health problems* (pp. 3-16). New York, NY: Springer-Verlag.
- Fondacaro, M. R., Brank, E. M., Villeneuve-Abraham, S., Luescher J., & McNatt, P. (2004). *The relationship between voice and judgments of procedural justice in resolving family conflict among ethnically diverse older adolescents: An examination of moderating and mediating influences*. Manuscript submitted for publication.

- Fondacaro, M. R., Dunkle, M. E., & Pathak, M. K. (1998). Procedural justice in resolving family disputes: A psychosocial analysis of individual and family functioning in late adolescence. *Journal of Youth and Adolescence*, 27, 101-119.
- Fondacaro, M. R., & Heller, K. (1983). Social support factors and drinking among college student males. *Journal of Youth and Adolescence*, 12, 285-299.
- Fondacaro, M. R., & Jackson, S. L. (1999). The legal and psychosocial context of family violence: Toward a social ecological analysis. *Law & Policy*, 21, 91-100.
- Fondacaro, M. R., Jackson, S. L., & Luescher, J. (2002). Toward the assessment of procedural and distributive justice in resolving family disputes. *Social Justice Research*, 15, 341-371.
- Formoso, D., Gonzales, N. A., & Aiken, L. S. (2000). Family conflict and children's internalizing behavior: Protective factors. *American Journal of Community Psychology*, 28, 175-199.
- Fraser, M. W. (1996). Aggressive behavior in childhood and early adolescence: An ecological-developmental perspective on youth violence. *Social Work*, 41, 347-361.
- Fulgini, A. J. (1998). Authority, autonomy, and parent-adolescent conflict and cohesion: A study of adolescents from Mexican, Chinese, Filipino, and European backgrounds. *Developmental Psychology*, 34, 782-792.
- Gehring, T. M., & Feldman, S. S. (1988). Adolescents' perceptions of family cohesion and power: A methodological study of the Family Systems Test. *Journal of Adolescent Research*, 3, 33-52.
- Gehring, T. M., Wentzel, K. R., Feldman, S. S., & Munson, J. (1990). Conflict in families of adolescents: The impact on cohesion and power structures. *Journal of Family Psychology*, 3, 290-309.
- Gorman-Smith, D., Tolan, P. H., Zelli, A., & Huesmann, L. R. (1996). The relation of family functioning to violence among inner-city minority youths. *Journal of Family Psychology*, 10, 115-129.
- Grisso, T., Barnum, R., Fletcher, K. E., Cauffman, E., & Peuschold, D. (2001). Massachusetts Youth Screening Instrument for mental health needs of juvenile justice youths. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 541-548.
- Harter, S. (1982). The perceived competence scale for children. *Child Development*, 53, 87-97.
- Harter, S. (1985). *Manual for the Self-Perception Profile for Children: Revision of the Perceived Competence Scale for Children*. Denver, CO: University of Denver.

- Harter, S. (1986). *Self-perception profile for adolescents*. Denver, CO: University of Denver, Department of Psychology.
- Hetherington, E. M., Clingempeel, W. G., Anderson, E. R., Deal, J. E., Hagen, M. S., Hollier, E. A., & Lindner, M. S. (1992). Coping with marital transitions: A family systems perspective. *Monographs for the Society of Research in Child Development*, 57, 1-242.
- Hogan, R., & Cheek, J. (1983). Identity, authenticity, and maturity. In T. Sarbin, & K. Scheibe (Eds.), *Studies in social identity*. New York, NY: Praeger Scientific Studies.
- Holahan, C. J., & Moos, R. H. (1982). Social support and adjustment: Predictive benefits of social climate indices. *American Journal of Community Psychology*, 10, 403-415.
- Holahan, C. J., & Moos, R. H. (1983). The quality of social support: Measures of family and work relationships. *British Journal of Clinical Psychology*, 22, 157-162.
- Hollingshead, A. B. (1957). *Two factor index of social position*. New Haven, CT: Author.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65, 599-610.
- Holmbeck, G. N., & O'Donnell, K. (1991). Discrepancies between perceptions of decision making and behavioral autonomy. *New Directions for Child Development*, 51, 51-69.
- Hoyle, R. H., & Panter, A. T. (1995). Writing about structural equation models. In R. H. Hoyle (Ed.), *Structural equation modeling* (pp. 158-176). Thousand Oaks, CA: Sage.
- Hu, L. T., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling* (pp. 158-176). Thousand Oaks, CA: Sage.
- Jackson, S. & Fondacaro, M. (1999). Procedural justice in resolving family conflict: Implications for youth violence prevention. *Law and Policy*, 21, 101-127.
- Johnston, L. D., Bachman, J. G., & O'Malley, P. M. (1979). *Drugs and the class of '78: Behaviors, attitudes, and recent national trends*. Washington, DC: U.S. Government Printing Office.
- Jöreskog, K. G., & Sörbom, D. (1984). *LISREL VI user's guide (3rd Edition)*. Mooresville, IN: Scientific Software.

- Juvenile Division of Lucas County Court of Common Pleas. (2002). 2002 annual report. Toledo, OH: Author. Retrieved July 14, 2004, from <http://www.co.lucas.oh.us/Juvenile>
- Kanner, A. D., Feldman, S. S., Weinberger, D. A., & Ford, M. E. (1987). Uplifts, hassles, and adaptational outcomes in early adolescence. *Journal of Early Adolescence*, 7, 371-394.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: The Guilford Press.
- Lahey, B. B., Waldman, I. D., & McBurnett, K. (1999). Annotation: The development of antisocial behavior: An integrative causal model. *Journal of Child Psychology and Psychiatry*, 40, 669-682.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York, NY: Plenum Press.
- Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York, NY: Plenum Press.
- Luescher, J., Fondacaro, M., & McNatt, P. (2001, August). *Ethnicity and procedural justice in resolving family conflict*. Poster session presented at the annual meeting of the American Psychological Association, San Francisco, CA.
- McCord, J. (1991). Family relationships, juvenile delinquency, and adult criminality. *Criminology*, 29, 397-417.
- Miller, S. A., Fondacaro, M. R., Woolard, J. L., Boggs, S., Brank, E., Cliett, W., Lucas, M., & Smith, S. W. (2003). *National middle school survey: School violence and beliefs about self, others, and the future*. Final Report to U.S. Department of Education: Fund for the Improvement of Education Program. Gainesville, FL: University of Florida.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701.
- Montemayor, R. (1986). Family variation in parent-adolescent storm and stress. *Journal of Adolescent Research*, 1, 15-31.
- Moos, R. H. (1975). Families. In R. Moos (Ed.), *Evaluating correctional and community settings*. New York, NY: Wiley.
- Moos, R. H., & Moos, B. S. (1981). *The Family Environment Scale*. Stanford, CA: Consulting Psychologists Press.

- Moos, R. H., & Moos, B. S. (1986). *Family Environment Scale manual (2nd ed.)*. Palo Alto, CA: Consulting Psychologists Press.
- Noller, P. (1994). Relationships with parents in adolescence: Process and outcome. In R. Montemayor, G. Adams, & T. Gullota (Eds.), *Personal relationships during adolescence* (pp. 37-77). Thousand Oaks, CA: Sage Publications.
- Nucci, L. & Lee, J. (1993). Morality and personal autonomy. In G. Noam & T. Wren (Eds.), *The moral self: Studies in contemporary thought* (pp. 123-148). Cambridge, MA: MIT Press.
- O'Donnell, K., & Holmbeck, G. N. (1989). *The Desire for Autonomy Scale*. Unpublished measure. Loyola University, Department of Psychology, Chicago, IL.
- Olson, D. H. (1986). Circumplex model VII: Validation studies and FACES III. *Family Process*, 25, 337-351.
- Olson, D. H., Portner, J., & Lavee, Y. (1985). *Faces III (Family Adaptability and Cohesion Evaluation Scales)*. St. Paul, MN: University of Minnesota, Family Social Science Department.
- Olson, D. H., Sprenkle, D. H., & Russell, C. S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. *Family Process*, 18, 3-28.
- Patterson, G. R. (1982). *A social learning approach: Coercive family process* (pp. 215-235). Eugene, OR: Castalia Publishing Company.
- Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *Antisocial boys: A social interactional approach*. Eugene, OR: Castalia Publishing Company.
- Prinz, R. J., Foster, S. L., Kent, R. N., & O'Leary, K. D. (1979). Multivariate assessment of conflict in distressed and nondistressed mother-adolescent dyads. *Journal of Applied Behavioral Analysis*, 12, 691-700.
- Robin, A. L., & Foster, S. L. (1984). Problem-solving communication training: A behavioral-family systems approach to parent-adolescent conflict. *Advances in Child Behavioral Analysis and Therapy*, 3, 195-240.
- Robin, A. L., & Foster, S. L. (1989). *Negotiating parent-adolescent conflict: A behavioral-family systems approach*. New York, NY: Guilford Press.
- Roehling, P. V., Robin, A. L. (1986). Development and validation of the Family Beliefs Inventory: A measure of unrealistic beliefs among parents and adolescents. *Journal of Consulting and Clinical Psychology*, 54, 693-697.

- Ryan, R. M., & Lynch, J. H. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development*, 60, 340-356.
- Seydlitz, R., & Jenkins, P. (1998). The influence of families, friends, schools, and community on delinquent behavior. In T. P. Gullotta, G. R. Adams, and R. Montemayor (Eds.), *Delinquent violent youth: Theory and interventions* (pp. 53-97). Thousand Oaks, CA: Sage Publications.
- Shek, D. T. L. (1988). Reliability and factorial structure of the Chinese version of the Purpose in Life Questionnaire. *Journal of Clinical Psychology*, 44, 384-392.
- Shek, D. T. L. (1992). Meaning in life and psychological well-being: An empirical study using the Chinese version of the purpose of life questionnaire. *The Journal of Genetic Psychology*, 153, 185-200.
- Shek, D. T. L. (1993). Measurement of pessimism in Chinese adolescents: The Chinese Hopelessness Scale. *Social Behavior and Personality*, 21, 107-119.
- Shek, D. T. L. (1998). A longitudinal study of the relations between parent-adolescent conflict and adolescent psychological well-being. *The Journal of Genetic Psychology*, 159, 53-67.
- Skinner, H. A., Steinhauer, P. D., Santa-Barbara, J. (1983). The Family Assessment Measure. *Canadian Journal of Community Mental Health*, 2, 91-105.
- Smetana, J. G. (1988). Adolescents' and parents' conceptions of parental authority. *Child Development*, 59, 321-335.
- Smetana, J. G. (1989). Adolescents' and parents' reasoning about actual family conflict. *Child Development*, 60, 1052-1067.
- Smetana, J. G. (1995). Context, conflict, and constraint in adolescent-parent authority relationships. In M. Killen & D. Hart (Eds.), *Morality in everyday life* (pp. 225-255). Cambridge, UK: Cambridge University Press.
- Smetana, J. G., Braeges, J. L., & Yau, J. (1991). Doing what you say and saying what you do: Reasoning about adolescent-parent conflict in interviews and interactions. *Journal of Adolescent Research*, 6, 276-295.
- Spielberger, C. D. (1973). *State-trait anxiety inventory for children*, Palo Alto, CA: Consulting Psychologist Press.
- Steil, J. M. (1994). Equality and entitlement in marriage: Benefits and barriers. In M. Lerner & G. Mikula (Eds.), *Entitlement and the affectional bond: Justice in close relationships* (pp. 229-258). New York, NY: Plenum Press.

- Steinberg, L. (1987). Impact of puberty on family relations: Effects of pubertal status and pubertal timing. *Developmental Psychopathology*, 23, 451-460.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescents. *Child Development*, 57, 841-851.
- Tedeschi, J. T., & Felson, R. B. (1994). *Violence, aggression, and coercive actions*. Washington, DC: American Psychological Association.
- Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. New York, NY: John Wiley & Sons.
- Tinsley, H. E. A., & Weiss, D. J. (1974). Interrater reliability and agreement of subjective judgments. *Research Methodology*, 358-376.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1-10.
- Tyler, T. R. (1989). The psychology of procedural justice: A test of the group-value model. *Journal of Personality and Social Psychology*, 57, 830-838.
- Tyler, T. R. (1994). Psychological models of the justice motive: Antecedents of distributive and procedural justice. *Journal of Personality and Social Psychology*, 67, 850-863.
- Tyler, T. R., & Blader, S. L. (2000). *Cooperation in groups: Procedural justice, social identity, and behavioral engagement*. Philadelphia, PA: Psychology Press.
- Tyler, T. R., Boekmann, R., Smith, H., Huo, Y. (1997). *Social justice in a diverse society*. Boulder, CO: Westview Press.
- Tyler, T. R., Degoey, P., & Smith, H. (1996). Understanding why the justice of group procedures matters: A test of the psychological dynamics of the group value model. *Journal of Personality and Social Psychology*, 70, 913-930.
- Tyler, T. R. & Lind, E. A. (1992). A relational model of authority in groups. In M. Zanna (Ed.), *Advances in experimental social psychology* (pp. 115-191). San Diego, CA: Academic Press, Inc.
- Tyler, T. R., & Smith, H. J. (1999). Justice, social identity, and group process. In T. Tyler, R. Kramer, & O. John (Eds.), *The psychology of the social self: Applied social research* (pp.223-264). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Weinberger, D. A. (1989). *Social-emotional adjustment in older children and adults: 1. Psychometric properties of the Weinberger Adjustment Inventory*. Stanford, CA: Stanford University.

- Wendorf, C. A. (2004). Primer on multiple regression coding: Common forms and the additional case of repeated contrasts. *Understanding Statistics*, 31, 47-57.
- Wentzel, K. R. & Feldman, S. S. (1996). Relations of cohesion and power in family dyads to social and emotional adjustment during early adolescence. *Journal of Research on Adolescence*, 6, 225-244.
- Zaslow, M. J., & Hayes, C. D. (1986). Sex differences in children's response to Psychosocial stress: Toward a cross-context analysis. In M. Lamb, A. Brown, & B. Rogoff (Eds.), *Advances in developmental psychology* (Vol. 4). Hillsdale, NJ: Erlbaum.

BIOGRAPHICAL SKETCH

Jennifer L. Luescher graduated from the University of Florida with a Bachelor of Science degree (with Honors) in psychology, in December 1997. She completed a Bachelor of Arts degree in criminology and law from the University of Florida in August 1999, and began the doctoral program in counseling psychology that same year. She earned her Master of Science degree in psychology in August 2002. Ms. Luescher completed her internship at the Northwest Ohio Internship Consortium in Toledo, Ohio. Her clinical work during internship included working with severely mentally ill adults and severely emotionally disturbed, children in both inpatient and outpatient settings. She conducted individual therapy, family therapy, and therapeutic groups, and completed psychological testing assessments. After completing her internship, Ms. Luescher began work as a Post-Doctoral Fellow in Adolescent Forensics in Boston, Massachusetts.

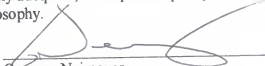
Ms. Luescher's research interests lie in the areas of procedural justice, delinquency, risk assessment and management with both adolescents and adults, and mental health and juvenile justice policy. She completed the Doctor of Philosophy degree in counseling psychology in December 2004. She is interested in pursuing work combining the assessment and treatment of adolescents involved in the legal system with applied research in related areas.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Mark Fondacaro, Chair
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



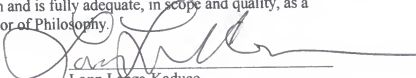
Gregory Neimeyer
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Scott Miller
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Lonn Lanza-Kaduce
Professor of Sociology

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 2004



Dean, Graduate School